Circular No. 861

Distribution of the Varieties and Classes of Wheat in the United States in 1949

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Agricultural Research Administration

UNITED STATES DEPARTMENT OF AGRICULTURE
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HISTORY OF VARIETAL DISTRIBUTION

Wheat varieties grown in the United States are continually changing because of the development and distribution of improved strains by State and Federal agricultural experiment stations and by private breeders. Varietal surveys furnish an historical record of this shifting of varieties, and, in addition, they form a basis for further wheat improvement. It is principally for these reasons that a wheat varietal survey has been

[1] The writers wish to express their appreciation to the agricultural statisticians of the field offices of the Division of Agricultural Statistics, of the Bureau of Agricultural Economics, who participated in collecting the basic information for this report; to C. E. Burkhead, head, Field Crop Statistics, Bureau of Agricultural Economics, for cooperation in preparing and compiling the questionnaires; and to Ruth Ross and Mary Geis, Division of Cereal Crops and Diseases, for assistance in making the calculations and assembling the data.

made by the United States Department of Agriculture at 5-year intervals since 1919. [2]

This circular presents the estimated acreages as determined from the seventh survey, that for the crop year 1949. The estimated acreages by varieties and classes were computed from the seeded acreages of wheat, by crop-reporting districts, as estimated by the Bureau of Agricultural Economics. This is the third time that seeded acreages have been available; they were used entirely for the 1939, 1944, and 1949 surveys. The earlier reports were based upon harvested acreages as reported by the regular and special agricultural census, except in 1934, when seeded wheat acreages, as estimated by the Bureau of Agricultural Economics, were used for some of the important wheat-producing States where abandonment was heavy because of drought.

The 1944 wheat acreages used in this circular are the preliminary estimates of the Crop Reporting Board, as prepared in December 1944 for States and in 1945 for counties. They differ somewhat from the Crop Reporting Board's revised State and county estimates that were prepared after the 1945 Federal Census enumeration of 1944 acreage became available. The 1949 acreages here used likewise are the preliminary estimates prepared in December 1949 and will eventually be superseded by the Board's later revisions.

Varietal-Survey Methods

The survey methods were similar to those reported for 1944. Questionnaires were sent from the State offices of the Bureau of Agricultural Economics to crop correspondents of the United States Department of Agriculture. The form of the questionnaires was changed for the 1949 survey. Separate questionnaires were printed for each wheat-growing region. The varieties known to be grown most extensively in each region were grouped by classes and listed alphabetically leaving space under each class for writing in the names of varieties not listed. The grower was asked to indicate the number of acres of each variety seeded on his farm for the 1949 harvest. Growers also were asked to indicate the acres harvested, but harvested acreage data are not included in this report. Questionnaires were sent to wheat-growing farmers in all States for which the Bureau of Agricultural Economics estimated wheat acreages in 1949.

Approximately 100,000 questionnaires were sent out. The new form of questionnaire, with varietal names listed by classes, apparently aided farmers in furnishing the desired information, since much larger returns were received than from previous surveys. About 43,100 usable question-

[2] Clark, J. A., Martin, J. H., and Ball, C. R. classification of american wheat varieties. U. S. Dept. Agr. Dept. Bul. 1074, 238 pp., illus. 1922.
——— Martin, J. H., Quisenberry, K. S., and others. distribution of the classes and varieties of wheat in the united states. U. S. Dept. Agr. Dept. Bul. 1498, 68 pp., illus. 1929.
——— and Quisenberry, K. S. distribution of the varieties and classes of wheat in the united states in 1929. U. S. Dept. Agr. Cir. 283, 75 pp., illus. 1933.
——— and Quisenberry, K. S. distribution of the varieties and classes of wheat in the united states in 1934. U. S. Dept. Agr. Cir. 424, 68 pp., illus. 1937.
——— and Quisenberry, K. S. distribution of the varieties and classes of wheat in the united states in 1939. U. S. Dept. Agr. Cir. 634, 75 pp., illus. 1942.
——— and Quisenberry, K. S. distribution of the varieties and classes of wheat in the united states in 1944. U. S. Dept. Agr. Cir. 761, 80 pp., illus. 1948.

naires were returned. An additional 5,000 were received from farmers who did not grow wheat in 1949.

Acreages reported under synonymous names were grouped under the standard name. The varietal names used are those recognized in Technical Bulletin 795[3] and in the annual reports on varietal registration issued through a cooperative agreement between the Bureau of Plant Industry, Soils, and Agricultural Engineering and the American Society of Agronomy.

In order to determine the percentage that each variety was of the total acreage of wheat reported in a crop-reporting district, the reported acreage for each variety was divided by the total acreage of wheat reported on usable questionnaires for that district. The estimated acreage of each variety in the district was then calculated from the total acreage of wheat seeded in the district, as estimated by the Crop Reporting Board. All varieties in each commercial class were then totaled for each district, State, and the United States, to arrive at the class acreages.

Maps were made showing the acreage distribution of all wheat of the different classes and of varieties grown on more than 200,000 acres in 1949. Each dot represents 5,000 acres on the total-wheat map, 2,000 acres on the class maps, and 1,000 acres on the variety maps. In order to obtain the data for these maps the acreage of varieties in each county was computed. This was done by calculating the percentage that each variety was of the total acreage reported on questionnaires from the county and calculating the estimated county acreage of each variety from the total acreage of wheat seeded in the county.

No reports were received from a few counties in which wheat was reported as being grown. In order to make the data more complete, estimates were made for such counties, based on information for the same counties from previous surveys, from reports from adjacent counties, and the writers' personal knowledge. Some reports listed varieties under local names that could not be identified, or reported the acreage as "just wheat." Owing to these discrepancies, the acreage of wheat not accounted for by varieties is listed in the table as "Others and not reported." The reported acreages of the varieties of durum wheat were much more complete in 1949 than in former survey years, when they were often listed by correspondents simply as "durum."

In 1919, 1924, 1929, 1934, 1939, 1944, and 1949, respectively, 139,152, 190, 213, 208, 216, and 199 distinct varieties were reported grown. In 1949, 27 new varieties were reported for the first time. Fifty varieties reported grown in 1944 were not reported in 1949. In all, 250 varieties are listed in the tables. Varieties having no reported acreage in either 1944 or 1949 are not listed but their acreage in the tables is included with "Others and not reported."

WHEAT ACREAGE OF THE UNITED STATES

The total seeded acreage of wheat in the United States in 1949 was nearly 85 million, which is about 20 million acres larger than the 1944 seeded acreage. The large increase over the 1944 acreage was general throughout the country except in the Atlantic Coast and Southern States. The increase was about 3 million acres each in Texas and Kansas. The distribution of the total seeded wheat acreage for the United States in 1949 is shown in figure 1.

[3] CLARK, J. A., and BAYLES, B. B. CLASSIFICATION OF WHEAT VARIETIES GROWN IN THE UNITED STATES IN 1939. U. S. Dept. Agr. Tech. Bul. 795, 146 pp., illus. 1942.

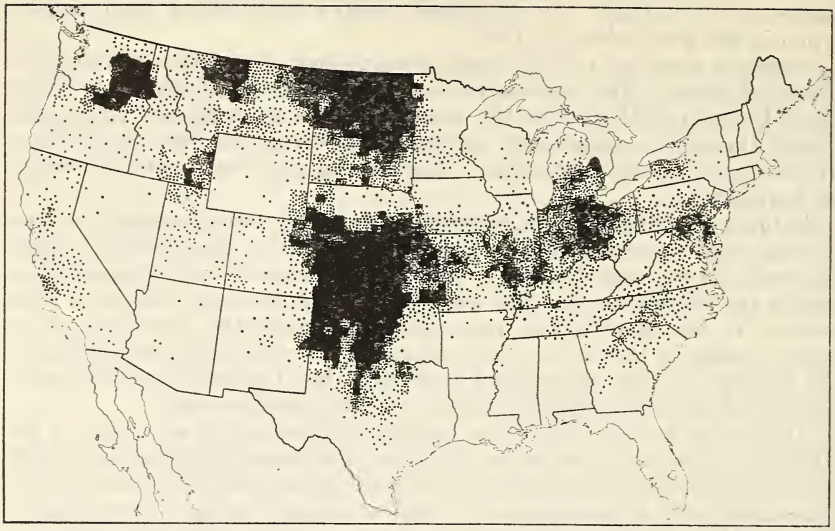

FIGURE 1.—Distribution of the total wheat acreage seeded in the United States in 1949. Estimated area, 84,931,000 acres.

ESTIMATED ACREAGE OF VARIETIES

The estimated acreages in 1949 and 1944 and the percentage of the total wheat acreage occupied by each variety at 5-year intervals starting in 1919 are shown by States in table 1. The classes and varieties are arranged in order of their 1949 acreage. The percentage of the varieties reported in earlier surveys that were not reported in either 1949 or 1944 are included with "Others and not reported."

The percentage of the total wheat area in each State occupied by each class at 5-year intervals since 1919 is given in table 2. The classes are arranged in order of importance in the State. The acreage included in table 1 as "Others and not reported" was distributed among the classes in proportion to the acreage reported for each.

The percentage in 1949 of each of the three leading varieties in each State, arranged by geographical divisions, is shown in table 3.

The estimated acreage for 1949 and 1944 and the percentage of the total wheat acreage occupied by each variety in the United States by 5-year intervals are shown in table 4. In this table the varieties are arranged alphabetically. Only those varieties reported in 1949 or 1944 are included.

The varieties grown on a million acres or more in each of the seven surveys are listed in table 5 in the order of their acreage. Turkey was the leading variety in all of the surveys from 1919 through 1939. In 1944 it ranked second to Tenmarq and in 1949 it was exceeded in acreage by three hard red winter varieties, Pawnee, Comanche, and Triumph, by two hard red spring varieties, Mida and Thatcher, and by the soft red winter variety, Thorne. Nineteen varieties representing all classes of wheat were grown on more than a million acres in 1949. This is four more than in any previous survey.

Of the 199 varieties reported in 1949, Pawnee was grown on more than 11 million acres, Comanche, Triumph, and Mida, each on more than

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*

[Figures in parentheses opposite the name of each State, under "Acreage," show the number of reports used in computing the data for each survey. The asterisk (*) indicates a variety reported as grown, but the estimate of acreage was less than 0.1 percent of the total acreage of the State]

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Alabama:								(67)	(61)
Soft red winter:									
Sanford						9.8	44.8	1,771	6,720
Fulcaster	16.8	9.3	6.8		3.4	.2	12.3	36	1,852
Redhart						.1	8.8	18	1,325
Purplestraw	54.4	43.0	50.1	89.9	77.5	80.3	7.6	14,459	1,134
Carala							6.7		1,001
Clarkan							4.5		672
Rice							1.2		180
Chancellor							1.2		174
Fultz							1.0		154
Flint	.6			7.1	12.2	4.1	.9	729	140
Forward							.7		104
Leap						3.5		632	
Others and not reported	28.2	47.7	43.1	3.0	6.9	2.0	10.3	355	1,544
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	18,000	15,000
Arizona:								(33)	(41)
White:									
Baart	55.3	18.6	79.8	85.4	83.2	57.9	31.0	15,054	9,308
Baart 38						14.6	20.6	3,811	6,166
Ramona 44							6.9		2,071
White Federation 38					6.4	1.3	5.2	333	1,554
Sonora	15.7	42.7	8.1	9.0	1.9	4.4	.4	1,151	125
Club (varieties not reported)	17.3	27.0	5.6	2.1	1.6	.1		17	
Pacific Bluestem	1.7	.2	1.2	.4		.1		15	
Hard red winter:									
Turkey	1.7	.3	1.6	.8	.5	18.3	6.7	4,769	2,022
Tenmarq						2.8		727	
Hard red spring:									
Marquis	.8	3.1	.5	1.5	2.7	.5		123	
Others and not reported	7.5	8.1	3.2	.8	3.7		29.2		8,754
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	26,000	30,000
Arkansas:								(50)	(194)
Soft red winter:									
Hardired							26.7		9,893
Redhart						1.0	9.7	658	3,586
Red May	24.9	6.0	5.2	26.8	21.0	44.7	8.1	29,017	3,008
Sanford							6.8		2,498
Fulcaster	11.9	27.8	24.5	13.6	31.5	21.6	3.8	14,019	1,400
Clarkan							3.6		1,338
Fultz	14.5	5.0	17.5	9.5	6.2		3.1		1,130
Carala							1.6		609
Flint					.7	.1	1.6	60	599
Chancellor							1.6		581
Purplestraw	8.4	6.4	4.6	5.3	9.3	7.9	1.5	5,111	560
Rice					1.6		.8		280
Forward							.7		261
Mediterranean	9.4	21.6	30.6	10.5	16.0	20.4	.7	13,281	259
V. P. I. 131							.5		192
Poole							.5		192
Fulhio							.2		63
Kawvale					2.3	1.4		928	
Early Premium						.7		465	
Hard red winter:									
Pawnee							.2		87
Turkey	5.6	5.2		7.4	3.5	2.2		1,461	
Others and not reported	25.3	28.0	17.6	26.9	7.9		28.3		10,464
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	65,000	37,000
California:								(196)	(726)
White:									
White Federation 38						33.1	32.2	197,409	238,426
Ramona 44							25.3		187,212
Baart 38						27.3	19.9	162,746	147,097
Big Club 43							5.2		38,568
Onas			2.6	4.6	5.2	6.2	5.0	36,974	37,090
Pacific Bluestem 37					.2	2.1	3.6	12,628	26,532
Galgalos	1.6	.8	.7	1.1	1.9	1.7	2.8	10,394	20,404

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
California—Continued									
White—Continued									
Poso 44							2.0		14,859
Bunyip	(*)	8.2	16.9	11.4	13.0	8.2	1.8	49,103	13,541
Sonora	17.5	11.9	10.7	5.5	2.2	.5	.2	3,103	1,623
Federation		(*)	3.7	9.3	1.6	2.2	.2	12,826	1,524
Lemhi							.1		861
Elgin							.1		738
Big Club	(*)	.2	.1	5.5	4.7	4.0		23,792	
Baart	10.7	32.1	24.8	27.6	26.6	3.8		22,584	
White Federation		.4	5.9	17.1	29.4	3.8		22,574	
Ramona				.1	1.2	2.3		13,735	
Pacific Bluestem	40.4	13.8	14.4	7.1	5.5	1.7		9,852	
Poso				.3	3.2	1.2		7,348	
Florence		(*)	.2	.5	.2	.6		3,592	
Escondido			.3	2.5	2.2	.2		1,107	
Pilcraw				.5	.4	.1		627	
White Winter	.2	.1	(*)	(*)	.1	.1		519	
Rex						.1		496	
Club (var. not reported)	10.3	16.7	8.0		.3	.1		465	
Hard Federation		.4	2.3	(*)	.8	.1		280	
Hard red winter:									
Turkey	.7	.8	.4	.3	.2	.2	.1	1,320	820
Rio							.1		492
Kanred			.1	.3	.1	.3		1,688	
Others and not reported	18.6	14.6	8.9	6.3	1.0	.1	1.4	838	10,213
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	596,000	740,000
Colorado:								(163)	(522)
Hard red winter:									
Comanche							19.2		694,960
Tenmarq					2.8	22.6	14.0	363,100	507,988
Wichita							12.8		462,080
Blackhull		.3	1.8	5.8	9.1	17.2	10.6	276,500	384,008
Turkey	66.5	51.0	51.4	53.5	44.2	26.8	9.0	430,806	326,826
Cheyenne					2.7	4.4	8.3	71,208	301,440
Early Blackhull						.1	5.1	1,272	183,590
Pawnee							4.1		148,120
Triumph							2.3		82,870
Red Chief						.2	1.7	2,920	62,880
Kanred		23.5	17.5	14.4	19.4	13.7	1.5	219,570	53,782
Chiefkan					(*)	3.1	1.2	50,088	42,780
Nebred						.2	.3	3,260	9,320
Westar							.1		4,660
Redhull							.1		3,980
Yogo							(*)		1,360
Nebraska No. 60			1.1	1.0	.9	.1		814	
Hard red spring:									
Thatcher					.7	2.8	4.3	45,584	155,380
Ceres				3.0	5.1	3.1	3.6	50,065	129,642
Reward						.1	.7	1,806	26,340
Marquis	9.4	13.9	17.0	12.7	7.5	4.3	.5	69,494	16,362
Pilot							.1		3,980
Komar				.1	4.2	.7	.1	11,977	3,420
Mida							(*)		1,360
Kitchener		.1	.2	.2	.2	(*)	(*)	275	1,078
Red Bobs		(*)	.1	(*)	.1	(*)		122	
White:									
Dicklow			.1	.2	.1	.2	.2	2,780	6,370
Baart	(*)		.1	.2	.7	.2	.1	2,734	4,080
Defiance	9.3	1.7	1.8	1.8	.4	.2	.1	3,092	1,488
Surprise	.1		.2	.1	.1	(*)		71	
Soft red winter:									
Denton							(*)		1,176
Jones Fife	.3	.2	.1	.1	.3	(*)		462	
Others and not reported	14.4	9.3	8.6	6.9	1.5		(*)		680
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,608,000	3,622,000

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Delaware:								(8)	(73)
Soft red winter:									
Thorne							40.5		27,546
Nittany		0.8	27.0	41.1	45.4	53.0	26.3	36,020	17,888
Leap	10.1	20.1	34.7	17.9	39.5	28.6	4.5	19,482	3,089
Blackhawk							3.9		2,629
Mammoth Red			4.4	2.3	1.4		2.9		1,953
Fulcaster	15.0	63.7	19.1	24.7	5.8	7.2	2.2	4,875	1,511
Redhart							1.8		1,190
Carala							1.5		1,008
Nudel							1.0		692
Poole							.7		503
Purplestraw							.5		346
Leapland							.4		252
Forward			2.9	1.2	.5		.3		220
V.P.I. 131						4.9		3,363	
White:									
Yorkwin							1.3		868
Others and not reported	74.9	15.4	11.9	12.8	7.4	6.3	12.2	4,260	8,305
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	68,000	68,000
Georgia:								(166)	(261)
Soft red winter:									
Sanford						12.9	72.0	31,339	147,594
Redhart				3.9	21.3	33.1	15.2	80,423	31,093
Purplestraw	54.2	69.2	83.4	77.0	71.9	49.4	5.5	120,196	11,290
Hardired						1.9	1.9	4,776	3,896
Chancellor							1.7		3,419
Flint	(*)	2.2	.5	5.9	2.5	.1	.6	114	1,157
Carala							.5		1,046
Gasta				.6	1.7	.5	.3	1,123	689
Fulcaster	12.4	7.1	3.2	3.7	1.3	1.8	.2	4,404	454
Rice							.1		299
Leap	1.6	1.7	2.6	.1		.2		473	
Others and not reported	31.8	19.8	10.3	8.8	1.3	.1	2.0	152	4,063
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	243,000	205,000
Idaho:								(286)	(1,884)
White:									
Lemhi					(*)	10.2	9.8	107,493	157,178
Baart	1.3	11.1	8.6	7.1	6.9	7.1	7.0	74,642	112,077
Idaed					.1	3.8	7.0	40,336	111,502
Goldcoin	8.1	8.4	8.7	3.6	3.9	7.4	6.8	77,717	107,954
Rex					4.6	7.4	6.4	78,210	102,317
Federation		2.1	16.3	18.2	16.8	10.6	5.3	112,213	[1]84,141
Elgin							3.8		61,342
Golden					.9	1.2	2.6	12,250	41,360
Hymar					.8	1.6	.8	16,739	13,249
Orfed							.7		[2]10,454
Alicel							.6		9,459
Dicklow	14.0	10.6	14.7	14.8	10.4	5.2	.6	55,148	9,417
Hard Federation		.1	.2	.1	.1	.2	.3	1,624	5,275
Wilhelmina				1.3	.3	(*)	.3	221	4,155
Florence		.1	1.1	.2	.4	.2	.1	2,585	1,760
Requa					(*)		.1		1,480
Hybrid 128	.2	.4	2.0	(*)	.1	.1	.1	1,313	825
Albit			.2	8.4	6.2	.2	(*)	2,084	561
Jenkin	1.9	4.3	2.8	1.6	.8	.2	(*)	1,915	440
Marfed							(*)		203
Pacific Bluestem	12.4	6.8	3.3	1.5	.8	.3	(*)	3,097	99
Little Club	2.2	.8	.1	.1		.2		1,644	
Sonora	2.0	1.2	.2	.4	.1	.1		1,387	
White Federation					.1	(*)		710	
Club (varieties not reported)	3.9	2.5	1.3	.6	.5	(*)		559	
Hard red winter:									
Turkey	15.6	26.7	19.9	23.3	26.3	31.7	18.5	334,803	296,140
Wasatch							14.1		224,520
Ridit			2.8	4.3	5.2	3.1	2.7	32,722	43,215
Sherman			.1	.2	.3	.2	2.5	1,824	39,490
Cache							1.9		29,920
Tenmarq						(*)	1.5	83	24,152
Mosida			.9	1.2	1.6	1.6	.5	16,457	8,122
Relief					.7	.6	.3	6,272	4,180

[1] 2,455 acres fall seeded.
[2] 9,747 acres fall seeded.

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Idaho—Continued									
Hard red winter—Continued									
Kanred	----	0.9	1.7	1.0	0.4	0.2	----	1,548	----
Oro	----	----	----	.1	.8	.1	----	839	----
Blackhull	----	----	(*)	.1	.4	.1	----	832	----
Hard red spring:									
Komar	----	----	----	----	(*)	.6	3.0	6,587	47,904
Marquis	16.2	14.8	7.3	5.1	5.4	4.0	1.6	42.420	25,371
Regent	----	----	----	----	----	----	.2	----	2,430
Ceres	----	----	----	----	.3	(*)	.1	428	1,024
Mida	----	----	----	----	----	----	(*)	----	316
Rescue	----	----	----	----	----	----	(*)	----	285
Premier	----	----	----	----	----	----	(*)	----	43
Thatcher	----	----	----	----	(*)	.3	----	3,480	----
Garnet	----	----	----	(*)	.3	.1	----	712	----
Red Bobs	----	(*)	.1	.6	.3	(*)	----	220	----
Soft red winter:									
Triplet	----	2.3	.9	.4	.7	.4	.3	4,266	5,200
Red Russian	3.4	1.2	2.3	1.9	.4	.5	.1	4,701	1,734
Lofthouse	.3	----	.2	.2	.4	.3	.1	3,093	1,705
Jones Fife	2.2	1.3	1.2	.6	.4	.1	(*)	1,403	578
Others and not reported	16.3	4.4	3.1	3.1	2.3	.1	.3	1,423	5,423
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,056,000	1,597,000
Illinois:								(200)	(1,003)
Soft red winter:									
Thorne	----	----	----	----	(*)	4.9	12.8	65,617	263,576
Fultz	24.2	23.0	19.8	25.9	18.2	19.2	6.6	258,830	136,456
Kawvale	----	----	----	----	1.1	4.0	5.1	53,818	105,503
Fulcaster	2.6	4.0	6.2	3.4	7.6	10.4	5.1	139,419	104,120
Fulhio	----	----	3.1	10.0	18.8	16.8	4.7	226,687	96,900
Royal	----	----	----	----	----	----	4.1	----	83,956
Fairfield	----	----	----	----	----	(*)	3.6	355	74,070
Clarkan	----	----	----	----	(*)	2.4	2.7	32,613	55,395
Red May	3.4	2.4	5.9	4.0	2.4	1.8	2.4	24,581	48,914
Newcaster	----	----	----	----	----	----	2.1	----	42,814
Prairie	----	----	----	----	----	(*)	2.1	244	42,795
Vigo	----	----	----	----	----	----	1.3	----	27,230
Rudy	.4	.1	.1	.1	.2	1.1	1.0	14,845	20,635
Wabash	----	----	----	----	(*)	1.2	.9	15,854	18,585
Goens	----	----	----	----	----	.3	.8	3,975	16,721
Mediterranean	6.4	2.5	2.3	3.0	1.0	4.0	.4	54,452	7,817
Nigger	.7	.7	.5	.3	.6	.8	.3	11,225	6,646
Poole	2.8	2.5	2.4	1.7	.5	1.3	.3	17,063	5,628
Red Wave	3.5	4.6	3.1	4.1	1.8	1.3	.3	17,812	5,404
Jones Fife	3.1	1.5	.8	.5	.6	(*)	.2	512	3,976
Blackhawk	----	----	----	----	----	----	.1	----	3,120
Prosperity	----	----	----	(*)	.3	.2	.2	2,909	3,038
Trumbull	----	(*)	.5	.7	.2	.4	.1	5,100	1,658
Nured	----	----	----	----	----	----	(*)	----	497
Leapland	----	----	----	----	----	----	(*)	----	469
Russian Red	.6	.4	.3	.6	----	3.3	----	44,521	----
Fultzo-Mediterranean	1.2	.2	.4	.4	.1	1.7	----	23,399	----
Illinois No. 2	----	----	----	.1	.6	.9	----	12,147	----
Harvest Queen	2.3	2.5	.4	.2	.1	.1	----	906	----
Nabob	----	----	----	(*)	.2	(*)	----	412	----
Red Rock	.1	(*)	(*)	----	(*)	(*)	----	188	----
Hard red winter:									
Pawnee	----	----	----	----	----	----	32.1	----	659,887
Turkey	26.9	41.3	35.8	27.6	17.4	11.3	4.0	151,721	82,487
Brill	----	----	----	----	.2	2.3	2.1	30,691	43,063
Purkof	----	----	1.7	5.2	8.5	2.6	1.8	35,092	36,653
Triumph	----	----	----	----	----	----	.4	----	7,455
Cheyenne	----	----	----	----	2.4	1.7	.2	22,566	5,217
Iobred	----	----	.4	.3	4.3	1.1	.1	14,686	1,513
Marmin	----	----	----	----	----	----	.1	----	1,188
Kanred	----	4.7	2.2	1.2	.6	.5	(*)	6,809	703
Wisconsin Ped. No. 2	----	----	----	(*)	.5	.2	(*)	2,258	615
Iowin	----	----	----	----	(*)	(*)	(*)	480	582
Michikof	----	----	2.4	1.4	2.9	.8	(*)	11,090	580
Red Chief	----	----	----	----	----	(*)	(*)	232	497
Minturki	----	----	.3	.3	.7	1.0	----	12,930	----
Ilred	----	.4	1.1	.4	.2	.4	----	4,633	----
Tenmarq	----	----	----	----	(*)	.1	----	809	----

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Illinois—Continued									
Hard red winter—Continued									
Ukrainka				0.1	0.2	(*)		390	
Blackhull		2.7	0.3	.2	.1	(*)		265	
White:									
Cornell 595							0.4		7,417
Dawson						.7	.1	8,755	2,891
Hard red spring:									
Henry							.3		5,302
Marquis	11.3	1.1	1.6	.4	.2		(*)		489
Thatcher					.1	.6		8,000	
Others and not reported	10.5	5.4	8.4	7.9	7.4	.6	1.2	8,109	24,538
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,347,000	2,057,000
Indiana:								(130)	(918)
Soft red winter:									
Fairfield						2.8	29.2	36,939	517,924
Vigo							20.5		364,585
Thorne					(*)	5.1	18.0	68,701	319,954
Rudy	8.5	12.4	9.3	10.1	12.9	13.4	7.4	179,581	131,870
Fultz	14.7	16.9	17.2	22.3	21.0	26.4	5.8	352,767	102,784
Trumbull		.5	2.9	4.9	9.6	11.1	2.6	147,869	47,032
Goens	2.2	3.3	.6	1.6	3.5	.1	2.4	590	42,089
Nigger	3.6	2.9	3.3	2.3	2.2	(*)	1.2	350	20,769
Fulcaster	1.3	4.6	1.9	.8	.9	.4	1.0	4,755	16,926
Red May	5.3	8.4	15.4	17.4	12.1	7.2	.5	96,146	8,662
Blackhawk							.5		8,245
Poole	25.3	19.1	12.8	11.5	8.4	4.9	.4	65,420	7,953
Kawvale							.3		5,448
Wabash					(*)	2.3	.2	30,952	4,290
Fulhio				.1	.4	.2	.2	3,165	3,120
Butler							.1		1,582
Royal							.1		1,203
Purdue No. 1				(*)	3.3	2.7	.1	36,651	1,148
Currell	1.0	.6	.7	.4		.1	.1	1,220	1,010
Prairie							(*)		330
Russian						1.6		21,300	
Red Wave	13.2	6.1	3.2	3.6	2.7	1.6		21,169	
Red Rock	.5	.1	.7	.3	.3	1.5		20,070	
Wheedling	.4	.2	.1	.2		.1		1,350	
Illinois No. 2						(*)		525	
Baldrock					.5	(*)		452	
Hard red winter:									
Pawnee							1.9		33,729
Purkof			10.6	10.2	11.2	8.9	1.0	120,243	17,592
Turkey	4.6	8.0	3.2	1.9	.9	3.7	.3	49,273	5,702
Brill							.1		1,762
Michikof		3.3	5.7	3.4	1.9	1.4		18,332	
White:									
Cornell 595							.2		3,510
Dawson					.2		.1		2,154
Yorkwin							.1		1,248
Hard red spring:									
Henry							(*)		808
Java						.2	.1	1,047	
Others and not reported	19.4	13.6	12.4	9.0	7.8	4.4	5.7	59,133	101,571
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,338,000	1,775,000
Iowa:								(187)	(916)
Hard red winter:									
Pawnee							65.7		292,980
Iowin			.2	2.4	21.2	50.3	13.1	80,504	58,378
Turkey	52.1	64.8	58.4	52.5	30.1	15.2	4.8	24,346	21,258
Iobred		.1	18.0	25.5	27.9	25.4	3.6	40,679	16,069
Nebred						.2	1.3	243	5,659
Red Chief							.7		3,286
Ioturk			1.0	2.6	2.4	2.7	.4	4,281	1,989
Nebraska No. 60							.3		1,487
Kanred		16.6	9.2	8.3	3.5	1.4	.3	2,298	1,097
Blackhull					.9	.1	.2	151	695
Iohardi							.1		449
Triumph							.1		212
Minturki		.1	.2		.1		(*)		170

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Iowa—Continued									
Hard red winter—Continued									
Chiefkan	------	------	------	------	------	------	(*)	----------	170
Minter	------	------	------	------	------	------	(*)	----------	170
Blue Jacket	------	------	------	------	------	------	(*)	----------	24
Hard red spring:									
Henry	------	------	------	------	------	------	2.9	----------	12,771
Mida	------	------	------	------	------	------	2.3	----------	10,169
Rival	------	------	------	------	------	(*)	2.0	58	9,053
Thatcher	------	------	------	------	7.1	3.7	1.5	5,841	6,516
Marquis	28.0	6.4	5.0	5.0	1.0	(*)	.3	18	1,210
Ceres	------	------	.1	.1	------	.1	.1	159	506
Pilot	------	------	------	------	------	.1	(*)	100	170
Hope	------	------	------	.2	.7	.1	------	150	----------
Mercury	------	------	------	------	------	(*)	------	70	----------
Soft red winter:									
Kawvale	------	------	------	------	------	.1	.2	208	995
Blackhawk	------	------	------	------	------	------	.1	----------	517
Durum:									
Pentad (red durum)	------	------	------	.2	------	.1	------	159	----------
White:									
Florence	------	------	.2	.5	.5	.1	------	130	----------
Others and not reported	19.9	12.0	7.7	2.7	4.6	.4	------	605	----------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	160,000	446,000
Kansas:								(1,718)	(5,000)
Hard red winter:									
Pawnee	------	------	------	------	------	(*)	36.0	423	5,840,315
Comanche	------	------	------	------	------	.1	20.8	7,477	3,382,131
Wichita	------	------	------	------	------	------	9.4	----------	1,528,497
Tenmarq	------	------	------	1.3	19.6	36.6	8.5	4,798,841	1,385,635
Triumph	------	------	------	------	------	.1	6.4	6,360	1,038,207
Early Blackhull	------	------	(*)	.6	1.6	9.0	4.6	1,185,234	749,796
Red Chief	------	------	------	------	------	4.4	3.9	582,748	626,969
Blackhull	(*)	10.5	33.4	34.9	31.0	15.5	3.6	2,029,311	588,431
Turkey	82.3	61.6	48.0	44.3	28.9	14.7	1.7	1,922,832	272,169
Chiefkan	------	------	------	------	2.8	8.6	1.3	1,132,498	205,836
Blue Jacket	------	------	------	------	------	------	.7	----------	107,301
Cheyenne	------	------	------	(*)	.2	.8	.6	103,361	103,297
Kanred	.8	19.0	12.0	10.4	4.5	2.7	.2	351,988	38,906
Iobred	------	------	.2	.1	1.1	.6	.2	72,469	30,784
Iowin	------	------	------	------	(*)	(*)	.1	5,198	24,988
Redhull	------	------	(*)	.3	.7	.1	------	13,902	----------
Nebred	------	------	------	------	------	.1	------	10,186	----------
Nebraska No. 60	------	------	(*)	(*)	(*)	.1	------	9,120	----------
Kanhull	------	------	------	------	------	(*)	------	1,165	----------
Ukrainka	------	------	------	------	------	(*)	------	950	----------
Ioturk	------	------	------	------	(*)	(*)	------	505	----------
Soft red winter:									
Kawvale	------	------	------	.3	6.4	4.4	.7	573,726	112,696
Clarkan	------	------	------	------	.5	1.3	.4	167,583	70,639
Fulcaster	1.0	.4	.6	.8	.5	.1	------	13,299	----------
Jones Fife	------	------	.3	.2	(*)	.1	------	6,410	----------
Currell	1.2	.7	1.0	1.0	.3	(*)	------	4,654	----------
Fultz	3.0	.5	.6	.4	.2	(*)	------	1,680	----------
Mediterranean	.7	.4	.1	.2	.3	(*)	------	1,647	----------
Harvest Queen	4.5	1.8	1.9	1.5	.4	(*)	------	1,018	----------
Red Wave	.1	(*)	.1	.1	(*)	(*)	------	287	----------
Hard red spring:									
Thatcher	------	------	------	------	------	(*)	------	3,639	----------
Reward	------	------	------	------	------	(*)	------	2,870	----------
Others and not reported	6.4	5.1	1.8	3.6	1.0	.7	.9	91,619	137,403
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	13,103,000	16,244,000
Kentucky:								(118)	(275)
Soft red winter:									
Thorne	------	------	------	------	------	9.1	32.7	46,726	137,334
Redhart	------	------	------	------	------	.2	13.4	810	56,308
Fultz	33.6	23.1	41.5	41.4	45.1	40.6	8.9	207,970	37,546
Clarkan	------	------	------	------	------	.2	6.9	1,154	28,894
Currell	8.3	8.7	10.0	10.0	15.8	19.3	5.3	98,687	22,056
Jones Fife	.9	(*)	1.8	1.1	.5	.3	2.8	1,406	11,776
Fulcaster	11.8	27.5	10.6	11.5	15.5	11.7	2.2	59,649	9,176
Purplestraw	(*)	------	.3	1.0	------	1.9	2.2	9,837	9,110

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Kentucky—Continued									
Soft red winter—Continued									
Carala							1.7		7,246
Mediterranean	6.0	6.6	6.8	5.4	4.0	3.3	1.7	17,039	6,964
Vigo							1.6		6,720
Flint						.5	1.0	2,450	4,272
Red May	1.9	1.4	.3	1.6	.4	.6	.5	2,833	2,024
Poole	12.1	13.4	11.0	15.0	6.6	7.3	.3	37,562	1,300
Forward						1.0	.3	4,884	1,282
Fulhio						.1	.3	403	1,120
Hardired							.2		874
Goens							.1		670
Trumbull		(*)	.7	1.1	.7	.4	.1	2,004	320
Ashland		1.3	4.3	.9	.1	1.0		5,384	
Leap	.2	.8		.4	.1	.9		4,733	
Nittany				(*)		.3		1,646	
Hard red winter:									
Turkey	.1	.1	1.0	1.1		.8	.9	4,030	3,822
Pawnee							.1		384
White:									
Yorkwin						.2	.8	1,223	3,400
Others and not reported	25.1	17.1	11.7	9.5	11.2	.3	16.0	1,570	67,402
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	512,000	420,000
Maryland:								(82)	(350)
Soft red winter:									
Thorne						3.3	45.0	13,164	173,675
Nittany		.3	6.3	7.2	12.0	19.3	12.7	77,460	49,170
Leapland					1.0	10.1	8.0	40,399	30,939
Forward			1.5	4.0	5.9	1.5	5.1	6,023	19,822
Leap	6.6	14.5	20.9	28.5	23.1	37.9	4.1	151,930	16,005
Purplestraw	2.0	.6	3.4		.1	1.3	1.9	5,200	7,429
Mammoth Red	.2	1.0	9.7	10.3	6.2	7.0	1.7	28,047	6,370
Fulcaster	26.8	42.9	25.5	31.5	30.8	8.7	1.6	34,792	5,947
Carala							1.4		5,511
V.P.I. 131							1.0		3,854
Redhart						(*)	1.0	160	3,706
Mediterranean	6.0	1.3	2.5	2.2			.7		2,478
Fultz	17.7	14.6	7.2	2.3	6.0	4.2	.3	16,793	992
Rice							(*)		210
Red May			.2	(*)	.8		(*)		147
Nured							(*)		11
Poole	1.8	4.9	4.9	.1	.3	3.0		12,159	
China	1.9	3.7	1.6	.6	1.2	2.6		10,677	
Currell	13.3	11.4	4.9	4.0	1.8	.6		2,220	
Fultzo-Mediterranean	2.9	.4	.5	.6		.4		1,600	
Valprize						.1		376	
Hard red winter:									
Pawnee							.1		415
Others and not reported	20.8	4.4	10.9	8.7	10.8		15.4		59,319
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	401,000	386,000
Michigan:								(156)	(2,432)
White:									
Yorkwin					(*)	11.8	67.9	114,124	884,730
Cornell 595							5.1		66,361
Dawson	6.1	3.3	2.3	40.4	47.3	46.3	3.3	449,519	43,486
Goldcoin	15.1	20.7	40.4	8.3	4.0	2.9	.4	28,444	5,088
Soft red winter:									
Thorne						3.2	4.9	31,346	63,881
Fairfield							1.4		17,824
Red Rock	22.1	38.3	28.8	23.4	16.0	14.4	1.1	140,076	14,266
Baldrock				3.0	13.2	8.6	.8	84,054	10,149
Vigo							.4		5,678
Nigger	3.1	1.9	1.2	1.5	.8	.7	.2	7,178	2,836
Trumbull		.1	1.0	.7	2.1	.3	.2	2,517	2,514
Poole	2.5	4.9	1.8	1.7	1.3	1.3	.2	12,169	2,278
Blackhawk							.1		1,755
Forward			.1		(*)	.4	.1	3,621	1,698
Red Wave	6.6	6.4	5.6	5.0	2.0	.9	.1	8,350	1,407
Red May	1.1	1.9	2.6	1.6		.5	.1	5,060	953
Clarkan							.1		790
Mediterranean	1.0	(*)	.4	.1			.1		790
Kawvale							(*)		566

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Michigan—Continued									
Soft red winter—Continued									
Fulcaster	0.6	1.2	0.9	0.7	1.7	0.2	(*)	1,874	566
Fultz	------	------	------	------	------	.1	(*)	768	395
Currell	------	------	------	------	------	------	(*)	------	283
Berkeley Rock	------	------	2.1	2.5	.9	.4	------	3,872	------
Russian	------	2.0	.6	------	1.0	.3	------	2,978	------
Red Clawson	3.9	1.9	1.1	1.5	.7	.3	------	2,696	------
Rudy	2.1	.4	.5	.3	.7	.2	------	1,878	------
Jones Fife	.3	.1	------	(*)	(*)	(*)	------	217	------
Hard red winter:									
Brill	------	------	------	------	------	------	.7	------	8,913
Pawnee	------	------	------	------	------	------	.4	------	5,291
Purkof	------	------	------	------	.7	------	.2	------	2,765
Turkey	.8	.8	.1	.3	1.4	(*)	.2	41	2,481
Tenmarq	------	------	------	------	------	------	.1	------	585
Hard red spring:									
Henry	------	------	------	------	------	------	.2	------	2,098
Regent	------	------	------	------	------	------	(*)	------	354
Rival	------	------	------	------	------	------	(*)	------	84
Thatcher	------	------	------	------	------	(*)	(*)	147	48
Marquis	6.7	.2	.4	.3	1.4	.2	(*)	1,561	24
Others and not reported	28.0	16.4	10.1	8.7	4.8	7.0	11.7	68,510	152,063
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	971,000	1,303,000
Minnesota:								(301)	(2,732)
Hard red spring:									
Mida	------	------	------	------	------	(*)	32.7	59	425,411
Rival	------	------	------	------	------	31.5	27.5	418,671	356,983
Regent	------	------	------	------	------	21.3	8.1	282,431	104,588
Redman	------	------	------	------	------	------	4.4	------	57,326
Premier	------	------	------	------	------	.1	3.0	1,635	39,118
Newthatch	------	------	------	------	------	.2	2.7	2,217	34,429
Henry	------	------	------	------	------	------	2.2	------	28,007
Cadet	------	------	------	------	------	------	2.0	------	26,152
Thatcher	------	------	------	------	71.6	16.8	1.8	223,206	23,713
Renown	------	------	------	------	.3	4.8	.7	64,144	9,274
Carleeds	------	------	------	------	.1	.6	.5	8,137	6,967
Pilot	------	------	------	------	------	6.1	.5	80,709	6,517
Marquis	57.3	72.2	59.3	44.3	1.5	.1	.3	1,158	3,448
Reward	------	------	(*)	.5	.4	.3	.2	3,746	2,439
Marquillo	------	------	.8	8.1	7.1	1.0	.1	14,041	1,053
Ceres	------	------	1.5	21.3	3.0	.2	.1	2,139	909
Progress	------	------	------	.2	.1	(*)	(*)	295	477
Rushmore	------	------	------	------	------	------	(*)	------	474
Rescue	------	------	------	------	------	------	(*)	------	310
Spinkcota	------	------	------	------	------	------	(*)	------	310
Vesta	------	------	------	------	------	------	(*)	------	190
Supreme	------	------	------	------	------	------	(*)	------	170
Sturgeon	------	------	------	------	------	------	(*)	------	77
Great Northern	------	------	------	------	(*)	.3	------	4,444	------
Apex	------	------	------	------	------	.1	------	1,507	------
Preston	21.1	5.4	3.6	1.9	.2	.1	------	1,175	------
Dixon	.5	.1	.1	(*)	------	(*)	------	538	------
Hope	------	------	------	.5	.7	(*)	------	462	------
Ruby	------	1.9	3.2	2.2	.1	(*)	------	38	------
Durum:									
Carleton	------	------	------	------	------	(*)	4.1	------	53,127
Stewart	------	------	------	------	------	------	1.9	------	24,193
Mindum	------	.7	1.9	2.8	2.2	4.3	1.0	56,817	13,257
Pentad (red durum)	(*)	1.1	.9	.4	(*)	.1	.6	1,180	8,198
Durum (var. not reported)	3.6	5.9	14.1	5.1	3.8	.4	.1	5,632	1,519
Kubanka	------	.1	.5	.1	.1	------	(*)	------	242
Vernum	------	------	------	------	------	------	(*)	------	200
Hard red winter:									
Minturki	------	1.9	6.2	9.3	6.9	11.0	2.3	146,046	29,379
Marmin	------	------	------	------	------	.2	.9	2,028	12,283
Turkey	1.6	4.0	4.9	.8	1.6	.2	.6	2,736	7,614
Karmont	------	------	------	------	------	------	.2	------	2,764
Minter	------	------	------	------	------	------	.2	------	2,260
Nebred	------	------	------	------	------	------	.1	------	1,240
Wasatch	------	------	------	------	------	------	(*)	------	408

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Minnesota—Continued									
Hard red winter—Continued									
Pawnee							(*)		144
Yogo							(*)		115
Newturk							(*)		77
Soft red winter:									
Blackhawk							0.8		9,863
Others and not reported	15.9	6.7	3.0	2.5	0.3	0.3	.4	3,809	4,775
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,329,000	1,300,000
Mississippi:								(39)	(24)
Soft red winter:									
Hardired						19.5	49.5	4,884	7,921
Redhart						18.0	10.0	4,498	1,601
Flint				50.5		40.5	9.2	10,112	1,474
Carala							7.0		1,115
Chancellor							4.6		742
Currell							1.8		280
Sanford						2.3	.6	580	95
Fultz						12.0		3,001	
Hard red winter:									
Tenmarq						7.7		1,925	
Others and not reported	100.0	100.0	100.0	49.5	100.0		17.3		2,772
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	25,000	16,000
Missouri:								(276)	(1,433)
Soft red winter:									
Clarkan					3.4	38.6	35.8	661,730	759,760
Kawvale					15.5	8.3	3.5	141,753	74,025
Fultz	35.2	35.9	24.6	25.7	15.8	13.7	2.6	234,717	55,255
Currell	3.4	1.4	9.0	5.5	5.8	5.4	2.1	93,128	44,595
Fulcaster	6.0	12.3	13.9	9.9	6.1	3.1	1.9	52,583	40,225
Red May	9.7	7.8	18.9	28.0	17.3	9.3	1.7	159,873	35,860
Fulhio		.1	(*)	.5	3.6	3.7	1.0	63,273	21,040
Thorne						.5	.6	8,036	13,745
Mediterranean	7.5	4.4	2.6	3.0	1.3	.6	.5	10,649	11,110
Hardired							.5		10,540
Vigo							.5		10,200
Fairfield							.4		8,645
Poole	3.8	8.7	6.9	7.0	2.8	1.0	.1	16,350	3,035
Red Wave	1.7	5.3	2.9	3.3	1.8	3.6	.1	62,311	2,680
Fultzo-Mediterranean	2.0	1.5	.6	.8	.1	.1	.1	975	2,010
Prairie							.1		1,820
Early Premium					2.5	1.8	.1	31,144	1,675
Blackhawk							.1		1,550
Goens							.1		1,340
Harvest Queen	3.9	3.4	3.5	5.8	2.7	.6	(*)	10,699	710
Forward							(*)		670
Russian Red	.3	1.0	.1		.1	.1	(*)	1,362	335
Nigger							(*)		240
Mealy						.1		2,362	
Gipsy	.1	.1	.4	.3		(*)		284	
Hard red winter:									
Pawnee							44.4		943,875
Red Chief							1.0		21,605
Turkey	13.0	7.6	6.3	4.9	6.0	2.7	.9	47,304	19,635
Comanche							.6		11,495
Purkof							.2		3,330
Iobred			.1	.2	3.8	3.0	.1	50,782	2,515
Brill							.1		1,775
Nebred							.1		1,340
Iowin					.1	.5	(*)	8,719	675
Tenmarq					.2	.1	(*)	846	420
Triumph							(*)		246
Kanred		1.9	1.3	.5	1.3	.6		9,544	
White:									
Cornell 595					(*)		(*)		210
Durum:									
Pentad (red durum)						.1		2,250	
Others and not reported	13.4	8.6	8.9	4.6	9.8	2.5	.8	43,326	16,820
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,714,000	2,125,000

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Montana:								(214)	(2,284)
Hard red spring:									
Thatcher	------	------	------	------	2.2	22.5	24.9	969,386	1,469,209
Ceres	------	------	.4	4.4	16.0	13.3	15.6	574,323	924,381
Marquis	40.3	72.2	72.8	66.7	55.6	28.4	12.3	1,226,726	726,977
Rescue	------	------	------	------	------	------	11.7	----------	693,952
Pilot	------	------	------	------	(*)	2.9	1.6	122,874	92,009
Newthatch	------	------	------	------	------	------	.9	----------	51,735
Supreme	------	------	6.8	5.4	2.7	.9	.9	38,112	51,003
Mida	------	------	------	------	------	------	.9	----------	50,872
Reward	------	------	(*)	.3	.1	1.5	.5	65,412	32,502
Vesta	------	------	------	------	------	(*)	.3	587	19,443
Cadet	------	------	------	------	------	------	.3	----------	17,792
Canus	------	------	------	------	------	.1	.2	3,348	13,104
Regent	------	------	------	------	------	.1	.2	3,563	11,011
Rival	------	------	------	------	------	------	.1	----------	6,618
Red Bobs	------	.4	.2	.1	.1	.1	.1	3,315	4,851
Rushmore	------	------	------	------	------	------	.1	----------	2,917
Redman	------	------	------	------	------	------	.1	----------	2,754
Henry	------	------	------	------	------	------	(*)	----------	2,199
Apex	------	------	------	------	------	------	(*)	----------	1,945
Renown	------	------	------	------	(*)	------	(*)	----------	254
Premier	------	------	------	------	------	------	(*)	----------	127
Komar	------	------	------	(*)	------	.1	------	2,268	----------
Reliance	------	------	------	.1	------	(*)	------	1,659	----------
Hard red winter:									
Yogo	------	------	------	------	.5	3.1	9.4	134,956	553,015
Karmont	------	(*)	1.7	2.6	2.8	4.4	8.6	190,394	507,534
Turkey	21.6	18.9	12.5	16.1	16.3	18.9	6.9	816,229	407,928
Newturk	------	------	.3	.6	1.2	1.4	1.3	59,023	75,083
Wasatch	------	------	------	------	------	(*)	.7	2,210	42,317
Montana No. 36	(*)	.7	.7	.5	.6	.4	.3	15,256	15,952
Chiefkan	------	------	------	------	------	------	.2	----------	13,770
Marmin	------	------	------	------	------	------	.1	----------	6,848
Pawnee	------	------	------	------	------	------	.1	----------	5,784
Comanche	------	------	------	------	------	------	.1	----------	5,188
Mosida	------	------	------	(*)	(*)	------	.1	----------	4,318
Minturki	------	------	------	------	------	------	(*)	----------	1,342
Minter	------	------	------	------	------	------	(*)	----------	1,064
Ridit	------	------	------	------	(*)	.2	(*)	7,880	987
Tenmarq	------	------	------	------	------	(*)	(*)	1,675	804
Cache	------	------	------	------	------	.1	(*)	5,229	642
Kanred	------	.1	.2	.2	.2	(*)	------	450	----------
White:									
Onas	------	------	------	------	------	.3	.2	11,599	11,743
Baart	(*)	.2	.1	.1	.1	(*)	.1	1,265	8,054
Goldcoin	(*)	(*)	(*)	(*)	(*)	(*)	.1	275	6,096
Rex	------	------	------	------	------	.1	.1	3,438	4,191
Florence	(*)	(*)	(*)	(*)	(*)	------	.1	----------	3,696
Hymar	------	------	------	------	------	------	(*)	----------	2,184
Hard Federation	------	------	------	------	------	------	(*)	----------	381
Lemhi	------	------	------	------	------	------	(*)	----------	268
Dicklow	(*)	(*)	.1	.1	.1	(*)	(*)	634	50
Federation	------	------	.5	.9	.3	.1	------	5,700	----------
Pacific Bluestem	.6	------	.1	.1	.1	.1	------	3,973	----------
Durum:									
Pentad (red durum)	.2	(*)	------	(*)	(*)	------	.3	----------	16,426
Durum (var. not reported)	15.8	3.7	.9	.8	.7	.4	.1	17,016	5,835
Stewart	------	------	------	------	------	------	.1	----------	4,268
Mindum	------	------	------	(*)	(*)	------	.1	----------	4,024
Peliss	.1	(*)	.1	------	(*)	------	(*)	----------	1,945
Kubanka	------	------	------	------	(*)	.3	------	13,266	----------
Soft red winter:									
Triplet	------	------	------	(*)	(*)	.1	.1	2,470	3,429
Jones Fife	1.1	.5	.4	.6	.2	.1	------	2,495	----------
Others and not reported	20.3	3.3	2.2	.4	.2	.1	.2	5,994	15,179
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	4,313,000	5,906,000
Nebraska:								(704)	(1,182)
Hard red winter:									
Pawnee	------	------	------	------	------	.3	33.4	10,549	1,561,213
Nebred	------	------	------	------	.2	15.3	26.1	566,129	1,220,883
Cheyenne	------	------	------	1.2	14.8	22.7	25.2	841,858	1,179,245
Turkey	82.7	63.5	68.2	59.5	58.0	43.4	7.8	1,607,565	363,840
Blackhull	------	(*)	.6	1.2	6.2	4.8	1.7	177,462	79,956

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Nebraska—Continued									
Hard red winter—Continued									
Tenmarq	------	------	------	------	0.2	2.8	1.4	103,676	64,565
Nebraska No. 60	------	0.5	8.9	18.9	10.1	4.8	.7	176,550	34,990
Chiefkan	------	------	------	------	.1	.2	.4	7,218	20,190
Early Blackhull	------	------	------	------	(*)	------	.4	----------	20,171
Iobred	------	------	(*)	.1	1.5	1.0	.3	35,918	16,184
Kanred	------	26.1	13.5	8.7	2.4	.8	.3	28,035	15,301
Wichita	------	------	------	------	------	------	.2	----------	10,147
Comanche	------	------	------	------	------	------	.2	----------	10,009
Iowin	------	------	------	------	.1	.5	.1	17,885	6,710
Triumph	------	------	------	------	------	------	.1	----------	6,469
Ioturk	------	------	------	------	------	------	.1	----------	2,773
Minturki	------	.2	------	(*)	.6	.1	------	2,759	----------
Hard red spring:									
Mida	------	------	------	------	------	------	.7	----------	29,910
Thatcher	------	------	------	------	.3	.9	.3	34,875	11,765
Ceres	------	------	------	2.9	1.6	.8	.2	31,249	11,172
Pilot	------	------	------	------	------	------	(*)	----------	1,024
Marquis	4.2	2.2	3.9	2.8	.8	.2	(*)	8,756	540
Reward	------	------	------	------	------	------	(*)	----------	197
Komar	------	------	------	------	.1	.2	------	7,897	----------
Java	.3	------	(*)	.2	.4	.1	------	4,246	----------
Supreme	------	------	------	------	------	.1	------	1,668	----------
Rival	------	------	------	------	------	(*)	------	785	----------
Haynes Bluestem	.7	(*)	.2	.1	------	(*)	------	544	----------
Dixon	------	------	------	.8	------	(*)	------	107	----------
Soft red winter:									
Fulcaster	(*)	.6	.3	.4	.7	.4	(*)	15,639	924
Clarkan	------	------	------	------	------	------	(*)	----------	510
Kawvale	------	------	------	------	.1	.5	------	19,387	----------
Harvest Queen	(*)	(*)	.5	.6	.1	(*)	------	370	----------
Durum:									
Durum (var. not reported)	4.9	2.3	1.3	.9	.4	.1	------	2,395	----------
Kahla	.1	------	(*)	------	(*)	(*)	------	1,063	----------
White:									
Baart	------	------	------	------	------	(*)	------	415	----------
Others and not reported	7.1	4.6	2.6	1.7	1.3	------	.4	----------	17,312
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	3,705,000	4,686,000
Nevada:								(20)	(74)
White:									
Federation	------	------	21.4	31.2	26.6	30.2	32.0	5,435	8,003
Lemhi	------	------	------	------	------	2.4	22.6	435	5,660
White Federation 38	------	------	------	------	------	2.4	6.8	431	1,695
White Federation	------	------	6.4	1.6	13.1	8.5	6.4	1,531	1,613
Romona 44	------	------	------	------	------	------	2.7	----------	684
Galgalos	------	------	------	------	------	------	2.7	----------	667
Dicklow	------	1.4	6.0	10.8	5.3	3.7	1.3	673	321
Pacific Bluestem 37	------	------	------	------	------	------	1.0	----------	241
Rex	------	------	------	------	------	------	.7	----------	167
Baart	.9	18.9	15.9	13.3	12.7	25.3	.5	4,559	132
Ramona	------	------	------	------	------	4.1	------	730	----------
Pacific Bluestem	30.5	12.8	8.8	11.2	2.7	.5	------	93	----------
Hard red winter:									
Turkey	7.3	27.9	1.7	15.5	18.1	19.5	5.7	3,503	1,423
Tenmarq	------	------	------	------	5.2	------	5.4	----------	1,353
Hard red spring:									
Marquis	13.6	12.9	2.2	2.2	1.2	.1	.4	23	93
Thatcher	------	------	------	------	------	2.6	------	472	----------
Komar	------	------	------	------	------	.7	------	115	----------
Others and not reported	47.7	26.1	37.6	14.2	15.1	------	11.8	----------	2,948
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	18,000	25,000
New Jersey:								(28)	(279)
Soft red winter:									
Thorne	------	------	------	------	------	12.0	80.0	9,000	85,578
Leap	6.2	14.8	43.5	64.8	79.4	77.7	8.2	58,289	8,753
Fultz	3.5	8.8	3.5	.6	------	------	3.5	----------	3,780
Nittany	------	2.6	12.1	13.7	8.1	4.1	.4	3,078	446
Nured	------	------	------	------	------	------	.3	----------	319
Poole	------	.2	------	------	(*)	------	.2	----------	252
Fulcaster	19.8	19.8	10.3	3.3	2.4	------	.2	----------	225
Leapland	------	------	------	------	------	------	.2	----------	174

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
New Jersey—Continued									
Soft red winter—Continued									
Forward			8.3	10.9	5.4	1.7	0.1	1,296	87
Mediterranean	31.7	13.6	.5		.1	1.1		777	
White:									
Yorkwin					.2	1.0	1.7	733	1,787
Cornell 595							.6		687
Dawson			.8		2.3	.4		280	
Honor						(*)		30	
Hard red winter:									
Brill							.2		203
Turkey						.1		66	
Others and not reported	38.8	40.2	21.0	6.7	2.1	1.9	4.4	1,451	4,709
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	75,000	107,000
New Mexico:								(35)	(134)
Hard red winter:									
Comanche							23.0		127,335
Turkey	61.5	76.7	57.2	65.4	76.1	22.3	22.9	74,492	127,114
Blackhull			1.0	7.0	8.8	67.8	12.2	226,354	67,702
Westar							12.1		67,188
Tenmarq							6.6		36,648
Wichita							4.8		26,468
Kanred		4.9	33.3	19.4	8.9	1.9	4.6	6,375	25,450
Early Blackhull							4.1		22,540
Chiefkan							1.7		9,671
Triumph							.5		2,545
Cheyenne							.3		1,851
Red Chief							.2		1,018
Blue Jacket							(*)		80
Hard red spring:									
Thatcher					.1	3.2	2.7	10,663	14,733
Marquis	6.0	3.6	2.4	3.8	3.5	2.8	1.8	9,517	9,945
Komar					.7	.9	.5	3,000	2,545
Ceres							.2		1,157
Supreme							(*)		180
Pilot							(*)		36
Soft red winter:									
Mediterranean							1.0		5,364
Clarkan							.1		509
White:									
Sonora	14.6	5.7	4.1	2.0	1.0	1.0	(*)	3,366	36
Baart	2.1	.8	.5	(*)	.1	.1		233	
Others and not reported	15.8	8.3	1.5	2.4	.8		.7		3,885
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	334,000	554,000
New York:								(191)	(1,133)
White:									
Yorkwin					43.7	86.7	47.6	319,867	204,233
Cornell 595						.3	45.4	1,126	194,941
Dawson	11.5	10.0	10.2	3.9	3.5		.9		3,837
Goldcoin	47.9	69.1	57.7	48.0	20.3	2.2		7,947	
Honor		1.5	7.3	26.2	13.3	2.1		7,781	
Soft red winter:									
Nured						4.4	2.1	16,185	8,819
Thorne							.1		551
Nittany		.1	.5	.1	(*)	.3	.1	1,158	248
Kawvale							.1		211
Forward		.9	7.9	13.2	6.0	1.1	(*)	3,986	166
Blackhawk							(*)		94
Leap	.1	.7	.8	.7	.5	.9		3,215	
Valprize				1.8	6.2	.3		1,308	
Hard red winter:									
Brill							.4		1,620
Pawnee							.1		599
Turkey							(*)		71
Hard red spring:									
Henry							.2		688
Mida							(*)		62
Marquis	11.3	1.0	2.0	1.2	.9	.8		2,935	
Others and not reported	29.2	16.7	13.6	4.9	5.6	.9	3.0	3,462	12,860
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	369,000	429,000

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
North Carolina:								(487)	(668)
Soft red winter:									
Redhart	----	----	0.7	11.0	28.9	54.6	54.4	334,711	278,366
Forward	----	----	----	1.6	5.0	5.3	7.2	32,915	36,608
Carala	----	----	----	----	----	1.2	7.1	7,247	36,324
Hardired	----	----	----	----	----	1.7	5.7	10,730	29,359
Fulcaster	32.2	39.6	33.9	21.7	17.7	5.2	5.6	32,149	28,587
Purplestraw	13.9	10.9	13.4	16.5	13.6	6.4	5.2	39,088	26,412
Leap	24.7	18.0	23.4	28.1	17.4	10.8	5.0	66,023	25,732
Thorne	----	----	----	----	----	----	1.4	----	7,347
V.P.I. 131	----	----	.4	.9	.3	.5	.6	3,010	3,090
Rice	1.2	2.2	.3	1.2	1.0	.4	.6	2,541	2,797
Leapland	----	----	----	----	----	----	.4	----	2,228
Atlas 50	----	----	----	----	----	----	.4	----	1,841
Currell	----	----	----	----	----	----	.3	----	1,664
Atlas 66	----	----	----	----	----	----	.3	----	1,535
Flint	5.3	4.7	5.3	9.3	5.4	5.4	.2	32,943	1,128
Fultz	3.0	4.6	5.2	2.7	2.0	1.1	.1	6,551	636
Oakley	.2	.5	.1	----	.1	.4	----	2,531	----
Fultzo-Mediterranean	1.2	4.3	.4	.1	.5	.4	----	2,289	----
Nittany	----	----	----	----	.2	.1	----	645	----
Diehl-Mediterranean	----	----	----	----	----	.1	----	504	----
Poole	(*)	.1	.2	.1	1.3	.1	----	319	----
White:									
Greeson	.8	3.3	2.8	3.3	2.4	2.2	.5	13,296	2,452
Others and not reported	17.5	11.8	13.9	3.5	4.2	4.1	5.0	25,508	25,894
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	613,000	512,000
North Dakota:								(715)	(1,627)
Hard red spring:									
Mida	----	----	----	----	----	.2	31.9	18,425	3,487,370
Thatcher	----	----	----	(*)	41.6	26.4	13.9	2,680,753	1,519,070
Rival	----	----	----	----	(*)	25.8	10.0	2,617,083	1,089,201
Cadet	----	----	----	----	----	----	5.1	----	558,307
Regent	----	----	----	----	----	9.8	2.3	995,776	255,405
Rescue	----	----	----	----	----	----	2.0	----	221,571
Pilot	----	----	----	----	(*)	7.0	1.8	708,130	194,179
Newthatch	----	----	----	----	----	----	1.5	----	160,502
Premier	----	----	----	----	----	.3	1.1	25,833	126,326
Vesta	----	----	----	----	----	3.7	.6	373,795	69,015
Ceres	----	----	3.0	34.0	20.3	2.7	.6	275,773	61,275
Redman	----	----	----	----	----	----	.4	----	48,529
Henry	----	----	----	----	----	----	.2	----	25,299
Marquis	47.0	52.9	52.6	39.4	3.0	.1	.2	11,480	21,466
Supreme	----	----	----	----	----	----	.2	----	21,359
Renown	----	----	----	----	.6	4.5	.1	456,497	10,848
Reward	----	----	(*)	1.5	1.2	.9	.1	89,496	9,856
Apex	----	----	----	----	(*)	.2	.1	21,145	5,275
Rushmore	----	----	----	----	----	----	(*)	----	2,074
Carleeds	----	----	----	----	1.0	.2	(*)	23,912	1,037
Great Northern	----	----	----	----	.1	.2	----	23,047	----
Marvel	----	----	(*)	.1	.3	(*)	----	1,620	----
Progress	----	----	.1	.2	.1	(*)	----	1,504	----
Marquillo	----	----	----	(*)	.2	(*)	----	1,414	----
Preston	8.4	2.7	1.4	.9	.1	(*)	----	1,100	----
Kota	----	4.9	.8	.4	----	(*)	----	825	----
Durum:									
Stewart	----	----	----	----	----	.2	10.4	12,389	1,139,336
Mindum	----	----	3.0	4.0	8.2	6.0	8.0	612,189	877,153
Carleton	----	----	----	----	----	.1	4.4	6,113	483,165
Kubanka	.3	5.3	6.9	6.9	5.0	1.6	2.3	163,435	252,357
Pentad (red durum)	.4	2.7	4.3	1.7	4.1	1.5	2.1	148,958	226,256
Durum (var. not reported)	28.7	22.5	23.3	8.9	13.5	8.3	.5	846,267	50,523
Vernum	----	----	----	----	----	----	.1	----	11,046
Arnautka	----	----	.1	(*)	.1	----	(*)	----	4,046
Nodak	----	(*)	.3	(*)	(*)	----	(*)	----	240
Acme	(*)	.1	.1	(*)	----	(*)	----	436	----
Hard red winter:									
Turkey	.4	.2	.2	.1	.1	(*)	.1	2,552	5,937
Marmin	----	----	----	----	----	----	(*)	----	1,037
Newturk	----	----	----	----	----	----	(*)	----	330
White:									
Florence	----	(*)	.7	.2	(*)	(*)	----	840	----
Others and not reported	14.8	8.7	3.2	1.7	.5	.3	(*)	41,213	2,610
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	10,162,000	10,942,000

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Ohio:								(516)	(4,016)
Soft red winter:									
Thorne					0.1	56.0	63.3	1,153,185	1,504,558
Trumbull	0.1	32.1	53.6	50.7	54.0	20.8	10.3	427,267	244,313
Nigger	3.5	5.3	2.9	3.3	3.1	2.8	3.6	57,704	85,410
Fairfield							2.9		69,057
Fulhio		4.4	11.9	15.6	20.4	6.6	2.4	135,330	55,969
Butler							2.1		50,516
Goens	2.2	2.1	.8	1.8	1.8	2.6	2.1	52,614	49,650
Vigo							1.6		37,391
Fulcaster	.8	1.2	.7	.7	.3	.7	.8	14,107	19,932
Poole	38.8	23.5	9.1	9.0	3.9	.9	.8	18,498	18,859
Fultz	10.3	5.8	2.9	4.1	2.7	2.8	.6	57,899	15,347
Leap	(*)	.4	1.4	.2	.5	.1	.6	2,962	13,973
Blackhawk							.6		12,740
Red May	.5	.2	.9	.4	.1	.3	.5	5,326	12,362
Rudy	1.6	.8	.8	.3	.1	.1	.5	2,433	11,272
Forward				(*)	.2	(*)	.5	605	10,436
Mediterranean	1.9	1.6	.7	.4	.2	.1	.2	2,640	5,548
Nittany					(*)	.1	.2	1,797	4,153
Nured							.1		2,619
Gipsy	2.9	2.1	1.1	1.6	.4	(*)	.1	818	1,255
Valprize							(*)		918
Clarkan							(*)		823
Currell							(*)		681
Nabob							(*)		681
Kawvale							(*)		565
Valley					(*)		(*)		464
Royal							(*)		225
Red Wave	8.5	2.1	1.0	1.0	.6	.1	(*)	2,161	199
Red Indian					.3	(*)	(*)	638	91
Gladden	.3	5.4	2.6	1.8	1.4	.4	(*)	7,450	23
Harvest Queen						.1		1,975	
Portage	.1	3.1	.8	1.2	.3	(*)		524	
White:									
Cornell 595							2.0		48,510
Goldcoin	2.6	.9	.5	2.3	2.5	.6	.3	11,711	6,506
Dawson	.2			(*)	.1	.1	.2	2,087	4,135
Yorkwin							(*)		918
Hard red winter:									
Pawnee							.6		13,517
Turkey	.2	.5	.6	.2	.1	.2	.2	2,945	5,610
Brill							.1		1,836
Purkof				(*)	(*)	(*)	.1	377	1,140
Iobred							(*)		182
Michikof			(*)		.3	.1		2,919	
Hard red spring:									
Henry							(*)		665
Mida							(*)		340
Others and not reported	25.5	8.5	7.7	5.4	6.6	4.5	2.7	92,028	63,611
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	2,058,000	2,377,000
Oklahoma:								(312)	(1,339)
Hard red winter:									
Triumph						1.3	41.5	65,878	3,135,287
Pawnee						(*)	18.9	228	1,429,932
Comanche						(*)	11.0	1,632	827,423
Early Blackhull					1.9	7.0	6.1	363,437	459,014
Red Chief						3.5	5.0	182,155	374,583
Wichita							4.9		371,700
Tenmarq				(*)	10.0	40.3	3.6	2,096,400	268,375
Cheyenne				(*)	.7	4.0	2.0	210,603	151,955
Blackhull		12.2	34.2	32.0	36.6	16.9	1.9	881,037	140,124
Turkey	68.6	52.3	47.4	44.9	29.3	15.0	1.6	782,167	118,634
Westar							1.2		93,780
Chiefkan					1.5	5.9	.8	308,906	59,160
Blue Jacket							.2		11,810
Redhull			.1	1.1	1.2	.4	.1	22,206	11,180
Kanred	.2	19.5	7.5	5.0	2.5	.7	.1	39,018	6,180
Iowin							.1		3,540
Nebraska No. 60							.1		3,240
Reliant						.1	(*)	6,022	2,430
Nebred						(*)	(*)	194	2,360
Sibley 81				.6	1.5	(*)	(*)	1,500	2,200
Iobred					(*)	.1	(*)	2,983	1,180

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Oklahoma—Continued									
Hard red winter—Continued									
Orienta	------	------	------	------	------	------	(*)	----------	810
Ioturk	------	------	------	------	------	0.1	------	2,505	----------
Alton	------	------	0.1	0.2	2.9	(*)	------	1,215	----------
Soft red winter:									
Clarkan	------	------	------	------	.1	.8	0.3	39,119	18,960
Austin	------	------	------	------	------	------	.1	----------	9,211
Harvest Queen	4.6	3.2	.8	1.8	1.3	.1	.1	4,255	7,955
Moking	------	------	------	------	------	------	(*)	----------	2,200
Fulcaster	6.8	5.3	2.1	2.9	2.5	1.2	(*)	59,832	2,105
Mediterranean	4.6	1.4	1.0	2.1	.8	.3	(*)	14,175	1,864
Red May	.8	.4	1.0	.6	------	.5	(*)	25,455	1,295
Denton	------	------	------	------	------	------	(*)	----------	352
Currell	1.5	1.9	1.6	4.5	3.0	1.0	------	52,699	----------
Kawvale	------	------	------	------	.4	.3	------	14,415	----------
Nigger	------	------	------	------	------	.1	------	4,037	----------
Fultz	3.3	.6	.5	1.1	.6	(*)	------	1,326	----------
Early Premium	------	------	------	------	------	(*)	------	853	----------
Red Rock	------	------	------	------	------	(*)	------	325	----------
Hard red spring:									
Reward	------	------	------	------	------	------	(*)	----------	1,400
Others and not reported	9.6	3.2	3.7	3.2	3.2	.4	.4	21,423	31,761
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	5,206,000	7,552,000
Oregon:								(127)	(1,903)
White:									
Federation	------	1.7	23.1	27.3	24.9	11.3	23.2	109,888	280,630
Elgin	------	------	------	------	------	------	17.1	----------	205,914
Rex	------	------	------	------	28.8	27.5	16.9	268,020	204,091
Alicel	------	------	------	------	.3	6.1	12.3	59,722	148,801
Golden	------	------	------	(*)	.1	3.8	4.1	36,774	49,574
Wilhelmina	------	------	2.1	3.1	3.5	5.8	3.7	56,307	44,369
Orfed	------	------	------	------	------	------	3.5	----------	42,487
Goldcoin	14.4	10.4	13.4	10.4	4.7	14.4	3.1	140,121	36,993
Baart	3.7	.8	1.3	1.5	2.3	1.8	2.1	17,388	25,463
Oregon Zimmerman	------	------	.3	1.7	2.1	1.2	1.8	11,915	21,309
Hard Federation	------	1.1	3.3	.7	------	.9	1.7	8,618	20,705
Galgalos	1.5	1.4	.6	.5	.7	.8	1.6	7,691	19,075
Jenkin	.4	2.0	2.0	2.2	.7	.7	.7	6,512	8,752
Idaed	------	------	------	------	------	------	.7	----------	8,075
Requa	------	------	------	------	------	------	.4	----------	5,077
White Winter	4.7	3.2	2.4	1.8	2.7	3.3	.3	32,093	3,829
Lemhi	------	------	------	------	------	(*)	.3	76	3,611
Prohibition	2.3	1.8	.6	.8	------	------	.1	----------	1,583
Hymar	------	------	------	------	.1	3.5	.1	34,614	1,244
Rink	1.3	2.2	2.8	.9	.6	.2	.1	1,614	959
Hybrid 128	9.6	29.4	12.6	9.4	1.8	3.6	.1	35,393	787
Dicklow	------	.2	.1	(*)	.1	------	.1	----------	733
Marfed	------	------	------	------	------	------	.1	----------	468
Albit	------	------	------	4.3	.5	------	(*)	----------	428
Hybrid 63	1.6	.7	------	.7	.3	(*)	(*)	341	242
Pacific Bluestem	11.3	3.2	1.4	.9	.7	.1	(*)	987	68
Bluechaff	(*)	.2	.1	(*)	.1	------	(*)	----------	64
Florence	------	------	.2	(*)	------	------	(*)	----------	26
White Federation	------	------	------	------	1.0	1.6	------	15,834	----------
Redchaff	2.0	.2	.6	.5	.4	.2	------	2,259	----------
Ramona	------	------	------	------	------	(*)	------	389	----------
Athena	------	------	------	------	.1	(*)	------	316	----------
Defiance	1.7	.6	.2	.4	.1	(*)	------	84	----------
Hard red winter:									
Turkey	13.2	26.0	24.6	20.0	14.2	10.7	3.5	104,243	42,462
Rio	------	------	------	.1	.3	1.1	.2	10,667	1,670
Mosida	------	------	(*)	.5	.3	.3	.1	2,569	1,637
Pawnee	------	------	------	------	------	------	(*)	----------	415
Hard red spring:									
Marquis	2.2	1.7	1.3	1.0	2.3	.3	.6	2,976	7,459
Kinney	2.2	1.0	.9	.8	------	.2	.5	1,732	5,298
Huston	2.1	2.9	.6	1.5	1.5	.5	.4	5,106	4,687
Comet	------	------	------	------	------	------	.1	----------	1,000
Thatcher	------	------	------	------	.1	------	(*)	----------	419
Komar	------	------	------	------	------	------	(*)	----------	294

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Oregon—Continued									
Soft red winter:									
Red Russian	0.7	1.3	0.3	0.2	0.3	0.1	0.1	1,411	1,654
Jones Fife							(*)		168
Triplet		.1	.4	2.5	.1	(*)		340	
Others and not reported	25.1	7.9	4.8	6.3	4.3		.4		4,480
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	976,000	1,207,000
Pennsylvania:								(758)	(626)
Soft red winter:									
Thorne						19.7	73.9	184,830	692,169
Nittany		22.9	32.9	34.3	41.9	35.2	3.7	330,604	34,353
Forward		.2	11.7	16.5	19.0	14.7	2.5	137,978	23,237
Fulcaster	23.4	18.2	8.2	8.6	3.4	2.7	1.8	25,413	16,502
Leap	1.8	19.7	25.5	26.4	25.1	20.8	1.1	195,254	10,007
Red May							.8		7,342
Nured						.3	.7	3,195	6,663
Blackhawk							.6		6,086
Fairfield						(*)	.4	221	3,893
Leapland						(*)	.3	214	2,654
Fultz	16.5	7.3	2.1	1.9	.7	1.0	.3	8,981	2,515
Trumbull		.1	.3	.3	(*)	.2	.3	1,827	2,507
Kawvale							.1		585
Red Wave	7.5	4.2	1.3	1.0	1.1	.8	.1	7,214	585
Vigo							.1		537
Clarkan							.1		488
Poole	6.4	2.6	.5	.7	1.3	.4	(*)	3,768	465
Nigger							(*)		290
Rudy	3.7	2.2	1.8	.3	.1	.5		4,414	
Grandprize	1.0	.2	.1	.3	(*)	.3		2,535	
Fulhio		(*)	.1	.3	.6	.2		2,052	
Red Rock		.9	.5	.7	2.4	.2		1,824	
Valprize						.1		1,038	
Gladden						.1		588	
Mealy	1.3	.3	.1	.2	.1	(*)		386	
Goens	(*)			(*)		(*)		252	
Mediterranean	9.3	2.0	.8	1.4	.6	(*)		215	
Russian Red						(*)		184	
Red Clawson	.3		.1		.3	(*)		94	
White:									
Cornell 595							1.4		13,688
Yorkwin					.1	1.8	1.1	16,830	10,346
Dawson							.2		1,701
Hard red winter:									
Brill							1.2		11,799
Turkey						(*)	.2	77	2,327
Purkof			(*)	.1	.3	.3	.1	3,041	1,355
Pawnee							.1		1,161
Hard red spring:									
Henry							.1		478
Rival							(*)		358
Marquis	.2	(*)	.1	(*)	(*)	(*)		9	
Others and not reported	28.6	19.2	13.9	7.0	3.0	.7	8.8	6,962	81,909
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	940,000	936,000
								(143)	(763)
South Carolina:									
Soft red winter:									
Redhart				32.5	47.5	49.8	60.6	144,494	122,972
Hardired						7.8	18.0	22,751	36,596
Purplestraw	38.1	33.1	37.3	34.4	29.1	26.8	5.5	77,666	11,068
Flint	8.5	19.3	9.5	24.1	18.7	14.8	3.6	42,957	7,350
Sanett						.2	2.7	482	5,513
Sanford							2.5		5,110
Chancellor							2.2		4,409
Carala							1.0		2,086
Leap	15.3	5.0	4.1	2.8	1.3	.3	.3	838	623
Forward				.6	.3		.1		261
Thorne							.1		197
Clarkan							.1		194
Trumbull							(*)		58
Leapland							(*)		49
Fulcaster	3.6	9.1	7.3	1.9	.7	.3		812	
Others and not reported	34.5	33.5	41.8	3.7	2.4		3.3		6,514
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	290,000	203,000

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued.

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
South Dakota:								(534)	(509)
Hard red spring:									
Mida	------	------	------	------	------	(*)	35.1	68	1,535,192
Rival	------	------	------	------	(*)	31.2	33.6	1,014,100	1,468,280
Pilot	------	------	------	------	(*)	9.4	5.8	305,196	253,663
Thatcher	------	------	------	------	24.5	14.0	3.2	455,110	140,356
Regent	------	------	------	------	------	1.6	1.6	51,825	67,435
Ceres	------	------	.4	25.2	33.5	20.1	1.2	653,914	51,272
Newthatch	------	------	------	------	------	------	.8	----------	35,410
Redman	------	------	------	------	------	------	.6	----------	27,412
Reward	------	------	.1	2.5	3.1	2.3	.6	73,613	25,537
Cadet	------	------	------	------	------	------	.6	----------	24,031
Vesta	------	------	------	------	------	.3	.4	11,675	17,414
Spinkcota	------	------	------	------	------	------	.3	----------	14,887
Marquis	61.2	47.1	47.1	43.0	8.4	3.0	.3	96,188	10,628
Rushmore	------	------	------	------	------	------	.2	----------	10,566
Henry	------	------	------	------	------	------	.2	----------	7,758
Supreme	------	------	------	------	------	------	(*)	----------	1,174
Rescue	------	------	------	------	------	------	(*)	----------	29
Komar	------	------	------	.2	.6	.9	------	29,261	----------
Renown	------	------	------	------	(*)	.6	------	21,688	----------
Carleeds	------	------	------	------	.1	.5	------	15,477	----------
Marvel	------	------	.1	(*)	.3	.5	------	15,380	----------
Kota	------	1.5	4.5	.6	(*)	.1	------	3,272	----------
Great Northern	------	------	------	------	------	.1	------	3,015	----------
Marquillo	------	------	(*)	(*)	.4	(*)	------	1,503	----------
Hope	------	------	.1	.1	.1	(*)	------	795	----------
Preston	10.3	2.0	1.1	.3	(*)	(*)	------	423	----------
Apex	------	------	------	------	------	(*)	------	232	----------
Premier	------	------	------	------	------	(*)	------	75	----------
Durum:									
Stewart	------	------	------	------	------	------	4.0	----------	175,611
Mindum	------	------	.1	1.4	1.1	.3	2.0	9,480	86,243
Pentad (red durum)	.3	3.7	15.4	4.4	8.6	1.3	.8	41,801	36,692
Kubanka	.6	1.5	1.0	2.6	.3	.1	.6	3,458	27,839
Carleton	------	------	------	------	------	------	.6	----------	27,470
Peliss	------	------	.1	.6	.4	2.4	.3	77,022	11,533
Durum (var. not reported)	16.8	33.8	21.7	5.8	7.3	3.8	.1	123,843	2,977
Vernum	------	------	------	------	------	------	.1	----------	2,146
Acme	------	2.3	1.4	3.1	.1	(*)	------	1,350	----------
Arnautka	------	.8	.1	.3	------	(*)	------	136	----------
Hard red winter:									
Nebred	------	------	------	------	------	(*)	4.1	942	180,520
Turkey	1.5	2.3	1.9	4.9	4.6	4.0	2.2	129,664	98,177
Minter	------	------	------	------	------	------	.3	----------	10,935
Newturk	------	------	------	------	------	------	.2	----------	6,555
Wasatch	------	------	------	------	------	------	.1	----------	2,977
Yogo	------	------	------	------	------	------	(*)	----------	1,489
Karmont	------	------	------	------	------	------	(*)	----------	1,073
Cheyenne	------	------	------	------	(*)	1.4	------	47,079	----------
Kanred	------	1.2	.4	.8	.3	.7	------	21,408	----------
Iowin	------	------	------	------	.2	.1	------	4,055	----------
White:									
Florence	------	.1	.7	2.6	4.3	1.2	(*)	39,062	315
Others and not reported	9.3	3.7	3.8	1.6	1.8	.1	.1	2,890	4,404
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	3,255,000	4,368,000
Tennessee:								(193)	(459)
Soft red winter:									
Fulcaster	40.5	43.0	40.1	44.7	43.0	34.0	24.1	166,926	78,647
Flint	.1	1.8	.9	8.2	5.4	10.4	9.0	51,157	29,410
Thorne	------	------	------	------	------	.1	7.6	266	24,955
Purplestraw	1.0	.1	2.1	.2	1.5	3.5	7.5	17,182	24,552
Redhart	------	------	------	------	------	2.0	6.3	9,915	20,571
Currell	4.3	2.9	8.0	6.7	13.6	16.2	5.3	79,766	17,322
Fultz	14.0	10.8	16.8	14.6	12.8	9.7	4.6	47,446	14,944
Carala	------	------	------	------	------	------	3.7	----------	11,938
Forward	------	------	------	5.1	6.1	5.7	2.4	28,146	7,976
Rice	2.2	9.0	.3	1.0	.3	1.6	2.0	8,083	6,517
Mediterranean	3.4	7.1	8.0	4.6	1.9	3.5	1.2	17,045	3,829
Poole	5.4	2.2	3.0	5.5	4.7	3.5	.9	17,024	3,082
Sanford	------	------	------	------	------	.1	.8	280	2,448
Hardired	------	------	------	------	------	(*)	.5	105	1,674
Nittany	------	------	.1	.1	.7	.4	.3	1,797	1,048
Chancellor	------	------	------	------	------	------	.2	----------	524
Jones Fife	------	.3	.1	2.2	.3	.3	.1	1,674	399
Leap	3.5	3.6	2.6	1.6	.7	.9	.1	4,390	393
Trumbull	------	------	------	------	------	------	(*)	----------	131

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Tennessee—Continued									
Soft red winter—Continued									
Vigo							(*)		86
V.P.I. 131			0.8	0.1		0.7		3,430	
China						.5		2,560	
Grandprize					1.8	.4		1,778	
Diehl-Mediterranean	0.7	1.2	1.3	.1	.3	.2		840	
Red May						.1		386	
Rudy						(*)		194	
Hard red winter:									
Turkey							.2		684
Others and not reported	24.9	18.0	15.9	5.3	6.9	6.2	23.2	30,610	75,870
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	491,000	327,000
Texas:								(225)	(992)
Hard red winter:									
Westar							26.0		2,004,170
Triumph						(*)	17.1	221	1,321,040
Comanche						.3	11.3	12,413	873,120
Early Blackhull					.5	2.9	8.7	130,789	668,090
Wichita							7.9		605,540
Tenmarq				.2	6.7	30.9	7.6	1,375,971	584,490
Blackhull		(*)	13.2	22.9	40.8	22.7	6.8	1,007,214	523,020
Pawnee							2.3		175,450
Turkey	33.9	43.5	51.4	51.6	37.7	21.6	1.4	961,772	107,990
Kanred		31.4	19.8	16.1	6.0	6.9	1.3	308,935	96,980
Chiefkan					.4	5.7	.9	254,041	72,720
Red Chief						1.1	.9	49,507	68,680
Cheyenne					(*)	1.5	.5	67,861	43,200
Blue Jacket							.1		4,800
Nebred							.1		4,800
Sibley 81							.1		4,800
Soft red winter:									
Austin						.1	2.7	6,050	209,000
Mediterranean	55.5	14.9	9.8	5.3	5.4	4.5	2.7	198,598	204,700
Red May	.3	.2	.1	.1	.1	.7	.2	29,002	19,060
Seabreeze							.1		6,750
Denton			.5	1.2	.9	.6	(*)	24,456	572
Fairfield						(*)		358	
Fulcaster	1.8	1.7	.5	.3	.3	.1		4,462	
Durum:									
Durum (var. not reported)	1.1	1.4	1.4	.5	.6	.4	.3	17,350	24,660
Stewart							(*)		750
Arnautka	.6	.2	.3	.2	(*)	(*)		625	
White:									
Florence					(*)	(*)		375	
Others and not reported	6.8	6.7	3.0	1.6	.6		1.0		72,618
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	4,450,000	7,697,000
Utah:								(131)	(458)
Hard red winter:									
Cache						2.9	28.0	8,611	123,375
Turkey	31.0	46.3	38.5	38.5	15.2	31.9	23.8	93,095	104,911
Wasatch						.3	19.0	782	83,878
Utah Kanred			7.9	13.1	15.8	7.3	9.7	21,273	42,962
Relief				(*)	30.8	4.8	.2	14,103	876
Comanche							(*)		57
Mosida						6.8		19,783	
White:									
Lemhi						.1	7.6	370	33,356
Baart		1.0	1.8	3.1	3.1	7.1	4.9	20,777	21,545
Dicklow	1.3	13.8	18.4	16.1	10.7	9.5	2.7	27,842	12,054
Federation		(*)	6.9	12.8	13.9	18.2	1.9	53,193	8,262
White Federation							.9		3,804
Big Club 43							.3		1,480
Sevier	.3	1.1	1.1	.1	(*)	.3	.2	875	1,002
Baart 38							.2		797
Utac			.2	.3	1.2	1.4	.1	4,291	501
Sonora	3.0	2.1	.8	.9	.5	2.4	.1	6,914	501
Silvercoin	.6	.7	2.1	.6		2.5	.1	7,215	286
Galgalos							.1		231
Poso 44							(*)		125
Club (var. not reported)	9.1	4.3	3.3	1.8	2.1	.5		1,569	
Kofod	2.9	2.9	1.0	0.5		0.5		1,443	

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Utah—Continued									
White—Continued									
Pacific Bluestem	4.4	4.0	1.2	1.4	------	0.5	------	1,386	----------
Touse	6.9	3.1	1.8	1.2	0.2	.4	------	1,073	----------
Goldcoin	8.5	2.6	.8	1.1	.3	.1	------	184	----------
Hard red spring:									
Marquis	5.8	2.9	1.1	1.2	------	.1	0.1	192	693
Ruby	------	------	.8	.3	.4	1.0	------	2,886	----------
Soft red winter:									
Lofthouse	1.1	.3	1.0	.4	------	1.1	------	3,266	----------
Squareheads Master	------	------	------	------	------	.2	------	555	----------
Odessa	3.2	1.3	.1	.8	------	.1	------	322	----------
Others and not reported	21.9	13.6	11.2	5.8	5.8	------	.1	----------	304
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	292,000	441,000
Virginia:								(464)	(1,033)
Soft red winter:									
Thorne	------	------	------	------	------	(*)	17.1	133	86,412
Redhart	------	------	------	.1	.7	20.0	16.2	114,342	82,270
V.P.I. 131	------	------	11.6	16.7	17.5	16.3	14.6	93,455	74,018
Vahart	------	------	------	------	------	------	12.0	----------	60,805
Leap	22.8	17.1	18.8	18.6	21.0	19.2	8.8	110,090	44,850
Forward	------	------	.7	2.3	7.8	4.4	7.3	24,990	37,062
Flint	4.2	5.0	5.8	8.0	8.0	6.7	3.7	38,412	18,514
Fulcaster	38.1	54.5	38.0	38.6	30.5	21.6	3.5	124,002	17,745
Leapland	------	------	------	------	.1	1.0	2.1	5,774	10,452
Hardired	------	------	------	------	------	.3	1.8	1,956	9,150
Purplestraw	.3	1.1	1.8	4.1	3.2	2.5	1.6	14,394	8,171
Carala	------	------	------	------	------	------	.5	----------	2,753
Fultz	10.5	6.5	2.3	2.9	3.6	1.6	.4	9,427	2,029
Nittany	------	------	.8	1.4	1.1	.9	.3	5,025	1,513
Mediterranean	6.2	4.0	.9	.5	.3	(*)	.2	230	844
Nured	------	------	------	------	------	------	.1	----------	329
Sanford	------	------	------	------	------	------	(*)	----------	256
Rice	------	------	------	------	------	------	(*)	----------	213
Poole	.5	.4	.1	------	.6	1.2	------	6,705	----------
V.P.I. 112	------	------	4.7	1.9	1.7	.7	------	4,201	----------
Red Rock	------	------	------	------	------	.1	------	729	----------
Trumbull	------	------	------	------	------	.1	------	512	----------
Red Wave	1.2	(*)	1.3	.7	.6	.1	------	377	----------
Fultzo-Mediterranean	.6	1.1	.7	.4	.2	(*)	------	91	----------
White:									
Cornell 595	------	------	------	------	------	------	.1	----------	384
Others and not reported	15.6	10.3	12.5	3.8	3.1	3.3	9.7	19,155	49,230
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	574,000	507,000
Washington:								(309)	(3,622)
White:									
Elgin	------	------	------	------	------	------	10.4	----------	328,299
Baart	12.3	14.6	20.0	26.0	28.7	26.4	10.2	668,360	323,609
Hymar	------	------	------	------	6.1	6.0	8.0	153,319	253,203
Goldcoin	9.0	5.9	7.0	3.7	2.7	6.6	6.2	167,921	197,041
Federation	------	.1	9.9	9.8	8.1	15.6	5.8	394,999	182,281
Golden	------	------	------	------	1.5	4.6	4.5	115,800	143,265
Orfed	------	------	------	------	------	(*)	4.1	618	129,711
Rex	------	------	------	------	4.3	3.9	3.7	99,623	116,647
Requa	------	------	------	------	.1	.2	3.3	4,424	105,503
Hybrid 128	7.4	9.2	8.5	3.3	1.6	2.7	2.4	69,939	76,287
Alicel	------	------	------	------	------	.1	2.4	2,921	75,543
Idaed	------	------	------	------	------	.1	1.5	3,446	46,841
Marfed	------	------	------	------	------	------	1.0	----------	31,327
Pacific Bluestem	24.9	13.0	9.0	5.0	3.8	1.3	.4	33,456	10,840
Jenkin	1.6	3.5	1.5	.7	.1	.2	.2	5,224	7,695
Hard Federation	------	(*)	.4	.1	(*)	------	.2	----------	7,664
Albit	------	------	3.3	14.6	3.2	1.0	.2	24,085	4,954
Wilhelmina	------	------	------	(*)	.2	(*)	.1	475	4,612
Pilcraw	------	------	.6	1.1	1.2	.6	.1	14,600	2,138
Major	------	------	------	(*)	.3	.2	(*)	6,018	1,474
Lemhi	------	------	------	------	------	------	(*)	----------	1,322
Dicklow	------	(*)	.3	.1	(*)	------	(*)	----------	284
White Federation	------	------	------	------	(*)	.3	------	6,996	----------
Little Club	.8	(*)	.2	.1	------	.1	------	1,301	----------
Oregon Zimmerman	------	------	------	------	------	(*)	------	551	----------
Big Club	.1	(*)	(*)	.1	------	(*)	------	456	----------
Club (var. not reported)	4.5	2.4	1.3	.1	.1	(*)	------	59	----------

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Washington—Continued									
Hard red winter:									
Turkey	7.6	24.5	15.6	20.2	21.4	24.3	25.4	614,798	801,430
Rio					.8	.8	3.6	19,312	112,786
Wasatch							1.3		39,688
Ridit		(*)	5.6	5.8	4.2	.3	1.0	8,599	30,825
Tenmarq					(*)		.2		6,873
Yogo					.7	.6	.2	15,968	5,493
Pawnee							(*)		1,167
Chiefkan							(*)		973
Cache							(*)		527
Mosida				.1	.3	.1	(*)	3,580	258
Oro					2.2	.4		10,018	
Blackhull						.1		2,962	
Kanred				.3	.1	(*)		472	
Soft red winter:									
Triplet		4.7	6.6	5.1	4.4	1.5	1.2	36,806	35,619
Red Russian	4.3	1.6	1.1	.3	.3	.6	.1	15,768	5,751
Jones Fife	8.7	7.6	2.4	1.1	.7	.4	.1	10,216	3,167
Hybrid 123	1.1	2.9	1.1	.1	.2	.3		6,431	
Squareheads Master				(*)	(*)	.1		1,639	
Hard red spring:									
Marquis	9.3	3.3	2.6	1.6	1.3	.4	1.3	12,088	37,765
Komar						(*)	.2	846	5,590
Thatcher					(*)	.1	.2	1,272	4,825
Red Bobs			.2	(*)	(*)	.1		1,591	
Garnet						(*)		43	
Others and not reported	8.4	6.7	2.8	.7	1.4	(*)	.5		14,723
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	2,537,000	3,158,000
West Virginia:								(158)	(518)
Soft red winter:									
Thorne						6.0	49.6	6,779	46,183
Fulcaster	29.1	36.2	50.6	41.8	24.5	37.4	7.8	42,220	7,293
Leap	3.1	7.0	15.9	16.7	28.8	36.5	4.4	41,212	4,064
Fultz	16.1	8.3	8.6	15.6	16.5	3.0	3.5	3,363	3,280
Trumbull		.2	3.6	4.8	3.3	3.0	2.6	3,352	2,421
Leapland						2.2	1.9	2,474	1,732
Redhart						.4	1.8	392	1,636
Nittany		(*)	.4	4.0	4.4	2.2	1.7	2,532	1,550
Carala							1.3		1,257
Purplestraw						.3	.7	293	620
Rice	.3	.9	.8	1.0	1.0	.1	.7	169	618
Mediterranean	10.5	4.0	5.6	.9	2.8	.4	.6	480	578
Poole	13.1	7.4	6.8	7.3	5.1	1.0	.6	1,151	575
Flint	.1	.5		.4			.5		474
Forward				.4	1.5	3.5	.4	3,934	413
V.P.I. 131			(*)	.5	.6		.3		248
Vahart							.2		186
Sanford							.2		150
Ashland							.1		128
Red May							.1		96
Chancellor							.1		92
Fairfield							.1		75
Butler							.1		62
Clarkan							.1		62
Red Wave	6.0	5.4	.8	3.0	2.2	1.4	(*)	1,597	15
Fulhio		.1	(*)	.4	3.5	1.4		1,640	
Nigger	(*)		.2	.4	.2	1.0		1,156	
White:									
Dawson					.1	.2		256	
Others and not reported	21.7	30.0	6.7	2.8	5.5		20.6		19,192
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	113,000	93,000
Wisconsin:								(115)	(452)
Hard red spring:									
Henry						.1	71.8	42	82,606
Progress		.3	25.9	53.7	33.2	24.5	.9	16,878	1,027
Sturgeon				(*)	5.8	7.4	.9	5,090	994
Rival						.3	.3	203	326
Pilot							.2		261
Regent						.2	.2	130	169
Thatcher					6.4	7.6	.1	5,260	127

TABLE 1.—*Estimated percentage of the total wheat area occupied by the varieties of wheat grown in each State at 5-year intervals since 1919, and the acreage in 1944 and 1949*—Continued

State, class, and variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Wisconsin—Continued									
Hard red spring—Continued									
Mida							0.1		89
Redman							(*)		36
Marquis	59.2	34.1	33.1	23.7	9.1	4.1		2,827	
Hope				.3	.1	(*)		5	
Preston	5.1	4.0		2.2	1.3	(*)		2	
Soft red winter:									
Blackhawk							21.6		24,907
Clarkan							.1		64
Fultz	.4	.6	2.6	.3		1.9		1,316	
Red May	.7	3.2	5.4	.4		.6		400	
Fultzo-Mediterranean						.2		144	
Hard red winter:									
Minturki		.1	.6	.7	1.9	4.2	1.5	2,867	1,700
Turkey	7.5	34.0	13.3	11.1	27.4	33.6	1.3	23,181	1,535
Brill							.4		425
Tenmarq							.2		289
Chequamegon						.5	.1	379	73
Ashkof			1.5	1.3	11.6	11.7		8,106	
Marmin						1.8		1,212	
Wisconsin Ped. No. 2	1.3	2.7	3.9	1.1		1.3		924	
White:									
Cornell 595							.2		186
Dawson							.1		186
Others and not reported	25.8	21.0	13.7	5.2	3.2	(*)		34	
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	69,000	115,000
Wyoming:								(69)	(133)
Hard red winter:									
Cheyenne					2.9	13.2	38.3	34,446	154,305
Turkey	15.7	9.8	28.2	38.1	26.6	39.7	20.0	104,090	80,568
Nebred							7.8		31,253
Tenmarq					(*)		5.1		20,468
Kanred		2.4	11.7	12.6	10.6	9.5	3.4	24,886	13,650
Pawnee							1.5		6,188
Early Blackhull							.8		3,094
Blackhull							.6		2,556
Triumph							.5		1,875
Red Chief							.3		1,375
Yogo							.2		714
Redhull							(*)		125
Nebraska No. 60					1.7	.4		980	
Hard red spring:									
Thatcher					.2	1.0	6.1	2,566	24,662
Marquis	34.5	65.2	42.5	33.0	38.9	15.2	4.9	39,935	19,912
Pilot							4.7		18,836
Mida							3.2		13,065
Ceres			(*)	2.8	9.8	13.3	.8	34,712	3,287
Supreme						3.3	.1	8,729	500
Komar					1.1		.1		238
Ruby		.8	.1		(*)	.3		895	
Dixon				.1	.2	.2		550	
Durum:									
Durum (var. not reported)	24.0	10.7	6.8	5.3	2.7	1.7	.6	4,411	2,380
Pentad (red durum)		.4	3.5	4.3	3.2	.8	.3	2,057	1,190
Kubanka		1.5		.4		(*)		58	
White:									
Onas							.2		828
Baart		.2	.3	.4	.5	1.2		3,087	
Soft red winter:									
Baldrock						.2		487	
Odessa	.1	.5	.1	.2	(*)	(*)		111	
Others and not reported	25.7	8.5	6.8	2.8	1.6		.5		1,931
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	262,000	403,000

TABLE 2.—*Estimated percentage of total wheat area in each State occupied by each class at 5-year intervals since 1919*

[The asterisk (*) indicates a class reported as grown but occupying less than 0.1 percent of the total wheat acreage of the State]

State and class	Percentage of the classes						
	1919	1924	1929	1934	1939	1944	1949
Alabama:							
Soft red winter	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Arizona:							
White	96.7	96.0	96.9	97.6	95.7	78.4	79.4
Hard red winter	1.8	.3	2.1	.8	.5	21.1	20.6
Hard red spring	.9	3.3	.7	1.5	3.0	.5	------
Durum	.6	.4	.3	.1	.8	------	------
Arkansas:							
Soft red winter	93.2	92.3	100.0	90.4	96.4	97.8	99.7
Hard red winter	6.7	6.8	------	9.6	3.6	2.2	.3
White	------	.9	------	------	------	------	------
Hard red spring	.1	------	------	------	------	------	------
California:							
White	98.0	98.4	98.8	99.4	99.8	99.5	99.8
Hard red winter	.7	.9	.5	.6	.2	.5	.2
Hard red spring	.9	.6	.7	------	------	------	------
Soft red winter	.3	------	------	------	------	------	------
Durum	.1	.1	------	(*)	(*)	------	------
Colorado:							
Hard red winter	67.4	77.3	75.0	79.2	79.5	88.3	90.3
Hard red spring	10.2	14.5	19.8	17.3	18.7	11.2	9.3
White	10.8	2.1	2.6	2.6	1.3	.5	.4
Soft red winter	.3	.3	.5	.1	.3	(*)	(*)
Durum	11.3	5.8	2.1	.8	.2	------	------
Delaware:							
Soft red winter	100.0	100.0	100.0	99.9	100.0	100.0	98.7
White	------	------	------	.1	------	------	1.3
Georgia:							
Soft red winter	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Idaho:							
White	55.8	52.3	61.3	60.2	54.9	56.1	52.5
Hard red winter	17.1	27.8	26.4	30.5	36.7	37.5	42.1
Hard red spring	20.6	14.9	7.5	5.8	6.4	5.1	4.9
Soft red winter	6.5	5.0	4.8	3.5	2.0	1.3	.5
Durum	------	(*)	------	------	------	------	------
Illinois:							
Soft red winter	56.8	47.2	49.7	60.1	58.7	76.7	57.7
Hard red winter	28.8	51.5	47.3	39.1	39.9	22.0	41.5
White	.1	(*)	.1	------	------	.7	.5
Hard red spring	14.0	1.3	2.9	.8	1.4	.6	.3
Durum	.3	(*)	(*)	(*)	------	------	------
Indiana:							
Soft red winter	94.2	87.3	79.0	83.9	84.4	85.3	96.1
Hard red winter	5.2	12.5	20.7	16.1	15.1	14.6	3.5
White	.1	.1	.2	------	.2	------	.4
Hard red spring	.4	.1	.1	(*)	.3	.1	(*)
Durum	.1	(*)	------	------	------	------	------
Iowa:							
Hard red winter	55.0	86.0	89.1	91.8	89.9	95.7	90.6
Hard red spring	42.1	11.5	7.9	6.6	9.6	4.0	9.1
Soft red winter	1.8	1.5	2.4	.4	------	.1	.3
Durum	1.1	1.0	.4	.7	------	.1	------
White	------	------	.2	.5	.5	.1	------
Kansas:							
Hard red winter	86.1	95.1	94.4	94.2	91.1	94.0	98.9
Soft red winter	13.3	4.8	5.3	5.6	8.8	5.9	1.1
Hard red spring	------	(*)	.2	.2	.1	.1	------
White	.2	(*)	------	------	------	------	------
Durum	.4	.1	.1	------	------	------	------
Kentucky:							
Soft red winter	99.0	99.9	98.2	98.5	100.0	99.0	97.8
Hard red winter	.1	.1	1.1	1.2	------	.8	1.3
White	.8	------	.2	(*)	------	.2	.9
Durum	.1	------	.5	------	------	------	------
Hard red spring	------	------	------	.3	------	------	------
Maryland:							
Soft red winter	100.0	100.0	100.0	100.0	100.0	100.0	99.9
Hard red winter	------	------	------	------	------	------	.1
Michigan:							
White	28.8	26.9	46.9	52.9	53.5	65.8	86.6
Soft red winter	59.9	72.4	52.3	46.1	42.9	34.0	11.3
Hard red winter	1.5	.4	.3	.7	2.2	(*)	1.8
Hard red spring	9.0	.3	.4	.3	1.4	.2	.3
Durum	.8	------	.1	------	------	------	------

TABLE 2.—*Estimated percentage of total wheat area in each State occupied by each class at 5-year intervals since 1919*—Continued

State and class	Percentage of the classes						
	1919	1924	1929	1934	1939	1944	1949
Minnesota:							
Hard red spring	94.4	86.1	70.0	80.7	85.3	83.8	87.1
Durum	3.8	7.9	17.7	8.3	6.0	4.8	7.8
Hard red winter	1.7	6.0	11.3	10.1	8.6	11.4	4.3
White	.1	(*)	.9	.8	.1	------	.8
Soft red winter	(*)	(*)	.1	.1	------	------	------
Mississippi:							
Soft red winter	100.0	100.0	100.0	100.0	------	92.3	100.0
Hard red spring	------	------	------	------	------	7.7	------
Missouri:							
Soft red winter	85.1	89.8	91.5	93.9	87.4	92.9	52.3
Hard red winter	14.6	10.2	8.5	6.1	12.6	7.0	47.7
White	------	------	------	------	(*)	------	(*)
Durum	------	------	------	------	------	.1	------
Hard red spring	.3	------	------	------	------	------	------
Montana:							
Hard red spring	55.9	74.5	82.2	77.2	76.8	69.9	70.8
Hard red winter	23.6	19.9	15.5	20.0	21.6	28.6	27.9
White	1.4	1.1	.9	1.3	.6	.7	.6
Durum	17.9	4.0	1.1	.8	.8	.7	.6
Soft red winter	1.2	.5	.3	.7	.2	.1	.1
Nebraska:							
Hard red winter	85.5	92.8	92.7	90.4	95.3	96.5	98.8
Hard red spring	9.1	2.9	4.9	7.5	3.3	2.4	1.2
Soft red winter	------	1.4	.9	1.1	.9	1.0	(*)
Durum	5.1	2.7	1.5	1.0	.5	.1	------
White	.3	.2	(*)	------	(*)	(*)	------
Nevada:							
White	74.7	57.9	96.0	82.2	74.6	77.1	87.7
Hard red winter	8.5	28.7	1.7	15.6	24.1	19.5	11.9
Hard red spring	16.8	13.4	2.3	2.2	1.3	3.4	.4
New Jersey:							
Soft red winter	99.3	99.1	97.3	100.0	97.5	98.5	97.4
White	.1	.9	2.7	------	2.5	1.4	2.4
Hard red winter	------	------	------	------	------	.1	.2
Hard red spring	.6	------	------	------	------	------	------
New Mexico:							
Hard red winter	65.3	83.8	91.6	93.0	93.9	92.0	93.6
Hard red spring	6.4	3.7	2.4	4.1	4.3	6.9	5.2
Soft red winter	------	.4	------	------	------	------	1.2
White	20.8	7.6	5.0	2.4	1.6	1.1	(*)
Durum	7.5	4.5	1.0	.5	.2	------	------
New York:							
White	70.5	89.6	82.5	80.1	85.3	92.1	96.7
Soft red winter	14.1	9.2	15.3	18.6	13.8	7.1	2.5
Hard red winter	.2	.1	------	------	------	------	.6
Hard red spring	15.0	1.1	2.2	1.3	.9	.8	.2
Durum	.2	------	------	------	------	------	------
North Carolina:							
Soft red winter	99.1	96.0	96.8	97.0	97.4	97.7	99.5
White	.9	4.0	3.2	3.0	2.6	2.3	.5
North Dakota:							
Hard red spring	69.8	67.6	60.1	77.9	68.9	82.3	72.1
Durum	29.8	32.2	39.0	21.7	31.0	17.7	27.8
Hard red winter	.4	.2	.2	.2	.1	(*)	.1
White	------	(*)	.7	.2	(*)	(*)	------
Ohio:							
Soft red winter	95.1	98.4	98.4	97.1	96.8	99.0	96.4
White	3.5	1.0	.6	2.4	2.8	.7	2.6
Hard red winter	.3	.5	.7	.3	.4	.3	1.0
Hard red spring	1.1	.1	.3	.2	(*)	------	(*)
Oklahoma:							
Hard red winter	75.4	86.1	91.6	85.4	91.1	95.8	99.5
Soft red winter	24.3	13.9	8.2	14.6	8.9	4.2	.5
Hard red spring	------	------	.1	------	------	------	(*)
Durum	.2	------	.1	------	------	------	------
White	.1	------	------	------	------	------	------
Oregon:							
White	77.3	65.3	71.3	71.4	80.0	86.8	94.4
Hard red winter	14.5	26.5	25.0	22.1	15.5	12.0	3.8
Hard red spring	7.4	5.6	2.9	3.4	4.1	1.0	1.6
Soft red winter	.8	2.6	.8	3.1	.4	.2	.2
Pennsylvania:							
Soft red winter	97.9	99.1	99.2	99.8	99.6	97.9	94.9
White	1.5	.8	.6	.1	.1	1.8	3.0
Hard red winter	.1	.1	.1	.1	.3	.3	2.0
Hard red spring	.5	------	.1	(*)	(*)	(*)	.1

TABLE 2.—*Estimated percentage of total wheat area in each State occupied by each class at 5-year intervals since 1919*—Continued

State and class	Percentage of the classes						
	1919	1924	1929	1934	1939	1944	1949
South Carolina:							
Soft red winter	100.0	100.0	100.0	100.0	100.0	100.0	100.0
South Dakota:							
Hard red spring	79.9	52.9	55.7	72.7	71.6	84.7	84.6
Durum	18.5	43.4	41.3	19.0	18.9	7.9	8.5
Hard red winter	1.6	3.5	2.3	5.7	5.3	6.2	6.9
White	------	.2	.7	2.6	4.2	1.2	(*)
Tennessee:							
Soft red winter	99.9	100.0	100.0	100.0	100.0	100.0	99.7
Hard red winter	.1	------	------	------	------	------	.3
Texas:							
Hard red winter	35.6	78.6	85.1	92.0	92.5	93.7	93.9
Soft red winter	62.4	17.9	11.8	7.1	6.8	5.9	5.8
Durum	1.8	2.1	1.7	.7	.7	.4	.3
White	.1	.1	(*)	.1	(*)	(*)	------
Hard red spring	.1	1.3	1.4	.1	(*)	------	------
Utah:							
Hard red winter	34.4	52.0	53.7	54.8	64.2	54.0	80.8
White	53.1	42.4	41.7	42.0	35.5	44.5	19.1
Hard red spring	6.4	3.2	2.0	1.6	.3	.1	.1
Soft red winter	6.1	2.4	1.6	1.6	------	1.4	------
Durum	(*)	------	1.0	------	------	------	------
Virginia:							
Soft red winter	99.7	100.0	100.0	100.0	100.0	100.0	100.0
White	.2	------	------	------	------	------	------
Hard red winter	.1	------	------	------	------	------	------
Washington:							
White	67.5	52.2	64.0	65.4	63.1	70.0	65.2
Hard red winter	7.9	25.4	21.4	26.3	29.9	26.6	31.8
Hard red spring	9.6	3.5	3.1	1.7	1.3	.5	1.6
Soft red winter	14.9	18.9	11.5	6.6	5.7	2.8	1.4
Durum	.1	(*)	------	------	------	------	------
West Virginia:							
Soft red winter	99.5	99.6	99.4	100.0	99.9	99.8	100.0
White	.4	.4	------	------	.1	.2	------
Hard red winter	------	------	.6	------	------	------	------
Hard red spring	.1	------	------	------	------	------	------
Wisconsin:							
Hard red spring	85.1	50.8	65.6	82.3	57.3	44.1	74.5
Soft red winter	1.6	5.0	8.5	.9	------	2.7	21.7
Hard red winter	10.2	42.5	22.5	14.5	41.9	53.1	3.5
White	.5	------	.4	.3	------	------	.3
Durum	2.6	1.7	3.0	2.0	.8	.1	------
Wyoming:							
Hard red winter	18.4	12.6	40.1	50.7	41.8	62.7	78.9
Hard red spring	48.9	69.6	45.6	36.9	50.4	33.4	20.0
Durum	28.5	16.2	13.3	10.7	6.1	2.5	.9
White	4.1	1.0	.9	1.5	1.7	1.2	.2
Soft red winter	.1	.6	.1	.2	(*)	.2	------

TABLE 3.—*Summary of percentage of the 3 most widely grown varieties of wheat in each State in 1949*

Division and State	First		Second		Third	
	Variety	Percentage of total	Variety	Percentage of total	Variety	Percentage of total
North Atlantic:						
New York	Yorkwin	47.6	Cornell 595	45.4	Nured	2.1
New Jersey	Thorne	80.0	Leap	8.2	Fultz	3.5
Pennsylvania	do	73.9	Nittany	3.7	Forward	2.5
North Central:						
Ohio	do	63.3	Trumbull	10.3	Nigger	3.6
Indiana	Fairfield	29.2	Vigo	20.5	Thorne	18.0
Illinois	Pawnee	32.1	Thorne	12.8	Fultz	6.6
Michigan	Yorkwin	67.9	Cornell 595	5.1	Thorne	4.9
Wisconsin	Henry	71.8	Blackhawk	21.6	Minturki	1.5
Minnesota	Mida	32.7	Rival	27.5	Regent	8.1

TABLE 3.—*Summary of percentage of the 3 most widely grown varieties of wheat in each State in 1949*—Continued

Division and State	First		Second		Third	
	Variety	Percentage of total	Variety	Percentage of total	Variety	Percentage of total
Iowa	Pawnee	65.7	Iowin	13.1	Turkey	4.8
Missouri	do	44.4	Clarkan	35.8	Kawvale	3.5
North Dakota	Mida	31.9	Thatcher	13.9	Stewart	10.4
South Dakota	do	35.1	Rival	33.6	Pilot	5.8
Nebraska	Pawnee	33.4	Nebred	26.1	Cheyenne	25.2
Kansas	do	36.0	Comanche	26.8	Wichita	9.4
South Atlantic:						
Delaware	Thorne	40.5	Nittany	26.3	Leap	4.5
Maryland	do	45.0	do	12.7	Leapland	8.0
Virginia	do	17.1	Redhart	16.2	V.P.I. 131	14.6
West Virginia	do	49.6	Fulcaster	7.8	Leap	4.4
North Carolina	Redhart	54.4	Forward	7.2	Carala	7.1
South Carolina	do	60.6	Hardired	18.0	Purplestraw	5.5
Georgia	Sanford	72.0	Redhart	15.2	do	5.5
South Central:						
Kentucky	Thorne	32.7	do	13.4	Fultz	8.9
Tennessee	Fulcaster	24.1	Flint	9.0	Thorne	7.6
Alabama	Sanford	44.8	Fulcaster	12.3	Redhart	8.8
Mississippi	Hardired	49.5	Redhart	10.0	Flint	9.2
Arkansas	do	26.7	do	9.7	Red May	8.1
Oklahoma	Triumph	41.5	Pawnee	18.9	Comanche	11.0
Texas	Westar	26.0	Triumph	17.1	do	11.3
Western:						
Montana	Thatcher	24.9	Ceres	15.6	Marquis	12.3
Idaho	Turkey	18.5	Wasatch	14.1	Lemhi	9.8
Wyoming	Cheyenne	38.3	Turkey	20.0	Nebred	7.8
Colorado	Comanche	19.2	Tenmarq	14.0	Wichita	12.8
New Mexico	do	23.0	Turkey	22.9	Blackhull	12.2
Arizona	Baart	31.0	Baart 38	20.6	Ramona 44	6.9
Utah	Cache	28.0	Turkey	23.8	Wasatch	19.0
Nevada	Federation	32.0	Lemhi	22.6	White Federation 38	6.8
Washington	Turkey	25.4	Elgin	10.4	Baart	10.2
Oregon	Federation	23.2	do	17.1	Rex	16.9
California	White Federation 38	32.2	Ramona 44	25.3	Baart 38	19.9

TABLE 4.—*Estimated percentage of the total wheat area in the United States occupied by each variety at 5-year intervals since 1919, and the acreage for 1944 and 1949*

[The asterisk (*) indicates a variety reported as grown, but the estimate of acreage was less than 0.01 percent of the total wheat acreage of the United States]

Variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Acme	------	0.13	0.12	0.18	(*)	(*)	------	1,786	----------
Albit	------	------	.13	.64	0.20	0.04	0.01	26,169	5,943
Alicel	------	------	------	------	(*)	.10	.28	62,643	233,803
Alton	0.01	(*)	.03	.01	.22	(*)	------	1,215	----------
Apex	------	------	------	------	(*)	.03	.01	22,884	7,220
Arnautka	.02	.05	.03	.03	.01	(*)	(*)	761	4,046
Ashkof	------	------	(*)	(*)	.02	.01	------	8,106	----------
Ashland	------	(*)	.01	.01	(*)	.01	(*)	5,384	128
Athena	------	------	------	------	(*)	(*)	------	316	----------
Atlas 50	------	------	------	------	------	------	(*)	----------	1,841
Atlas 66	------	------	------	------	------	------	(*)	----------	1,535
Austin	------	------	------	------	------	.01	.26	6,050	218,211
Baart	.69	.95	1.24	1.30	1.39	1.27	.59	831,098	504,268
Baart 38	------	------	------	------	------	.25	.18	166,557	154,060
Baldrock	------	------	------	.04	.17	.13	.01	84,993	10,149
Berkeley Rock	------	------	.03	.04	.01	.01	------	3,872	----------
Big Club	.03	.04	.01	.06	.05	.04	------	24,248	----------
Big Club 43	------	------	------	------	------	------	.05	----------	40,048
Blackhawk	------	------	------	------	------	------	.08	----------	71,506
Blackhull	(*)	2.99	9.77	11.11	12.72	7.05	2.10	4,602,088	1,786,492
Bluechaff	(*)	(*)	(*)	(*)	(*)	------	(*)	----------	64
Blue Jacket	------	------	------	------	------	------	.15	----------	124,015

TABLE 4.—*Estimated percentage of the total wheat area in the United States occupied by each variety at 5-year intervals since 1919, and the acreage for 1944 and 1949*—Continued

Variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Brill					0.01	0.05	0.08	30,691	71,396
Bunyip	(*)	0.06	0.19	0.12	.15	.07	.02	49,103	13,541
Butler							.06		52,160
Cache						.02	.18	13,840	154,464
Cadet							.74		626,282
Canus						.01	.02	3,348	13,104
Carala						.01	.09	7,247	71,894
Carleeds					.14	.07	.01	47,526	8,004
Carleton						.01	.66	6,113	563,762
Ceres			.56	7.31	5.61	2.47	1.39	1,622,762	1,184,625
Chancellor							.01		9,941
Chequamegon						(*)	(*)	379	73
Cheyenne				.07	1.16	2.13	2.29	1,398,982	1,940,510
Chiefkan					.75	2.67	.50	1,752,751	425,270
China	.09	.11	.02	.01	.01	.02		13,237	
Clarkan					.23	1.37	1.10	902,199	939,098
Club (var. not reported)	.53	.32	.20	.04	.03	.01		4,650	
Comanche						.03	6.98	21,522	5,931,718
Comet							(*)		1,000
Cornell 595						(*)	.40	1,126	335,894
Currell	.88	.51	.69	.79	.69	.50	.10	332,374	87,891
Dawson	.17	.12	.07	.58	.59	.70	.07	460,897	58,390
Defiance	.27	.07	.07	.06	.02	(*)	(*)	3,176	1,488
Denton			.03	.08	.05	.04	(*)	24,456	2,100
Dicklow	.23	.23	.41	.29	.22	.13	.03	87,077	29,229
Diehl-Mediterranean	.16	.12	.06	.08	.01	(*)		1,344	
Dixon	.04	(*)	.02	.06	.01	(*)		1,195	
Durum (var. not reported)	5.78	6.06	5.61	1.92	2.35	1.55	.10	1,016,948	87,894
Early Blackhull			(*)	.13	.51	2.56	2.48	1,680,732	2,106,295
Early Premium					.07	.05	(*)	32,462	1,675
Elgin							.70		596,293
Escondido			(*)	.03	.02	(*)		1,107	
Fairfield						.06	.81	37,873	691,488
Federation		.06	1.21	1.14	.93	1.06	.66	694,254	564,841
Flint	.13	.20	.11	.29	.21	.27	.08	178,934	64,518
Florence		.02	.21	.20	.22	.07	.01	46,584	5,797
Forward		.01	.25	.42	.50	.38	.17	248,378	140,303
Fulcaster	3.53	3.57	2.26	2.29	1.91	1.24	.42	815,267	354,137
Fulhio		.16	.41	.88	1.36	.66	.21	432,550	178,212
Fultz	6.59	3.51	2.33	3.07	2.28	1.87	.45	1,212,835	377,243
Fultzo-Mediterranean	.42	.17	.07	.06	.01	.04	(*)	28,498	2,010
Galgalos	.05	.03	.02	.02	.03	.03	.05	18,085	40,377
Garnet			.01	.02	.01	(*)		990	
Gasta				(*)	(*)	(*)	(*)	1,123	689
Gipsy	.17	.16	.04	.07	.01	(*)	(*)	1,102	1,255
Gladden	.01	.20	.07	.06	.05	.01	(*)	8,038	23
Goens	.18	.20	.04	.11	.14	.09	.13	57,431	110,470
Goldcoin	1.30	1.32	1.44	.72	.42	.66	.42	434,320	359,678
Golden				(*)	.06	.25	.28	164,824	234,199
Grandprize	.05	.03	(*)	(*)	.01	.01		4,313	
Great Northern					.02	.05		30,506	
Greeson	.01	.02	.02	.02	.02	.02	(*)	13,296	2,452
Hard Federation		.03	.10	.02	.01	.02	.04	10,522	34,025
Hardired						.07	.13	45,202	109,903
Harvest Queen	1.38	.79	.58	.62	.28	.03	.01	19,223	8,665
Haynes Bluestem	2.14	.26	.12	.04	(*)	(*)		544	
Henry						(*)	.20	42	168,679
Honor		.01	.03	.11	.06	.01		7,811	
Hope			.01	.03	.05	(*)		1,412	
Huston	.03	.05	.01	.02	.02	.01	.01	5,106	4,687
Hybrid 63	.05	.02		.01	(*)	(*)	(*)	341	242
Hybrid 123	.04	.10	.04	.01	.01	.01		6,431	
Hybrid 128	.40	.82	.58	.23	.07	.16	.09	106,645	77,899
Hymar					.20	.31	.32	204,672	269,880
Idaed					(*)	.07	.20	43,782	166,418
Illinois No. 2				(*)	.02	.02		12,672	
Ilred		.02	.04	.01	.01	.01		4,633	
Iobred		(*)	.17	.19	.76	.33	.08	217,517	68,427
Iohardi							(*)		449
Ioturk			.01	.02	.03	.01	.01	7,291	4,762
Iowin			(*)	.01	.17	.18	.11	116,841	94,873
Java	.03	.02	.03	.03	.03	.01		5,293	
Jenkin	.09	.22	.15	.08	.03	.02	.02	13,651	16,887
Jones Fife	.65	.41	.27	.19	.10	.04	.02	24,795	20,064
Kahla	.03	.09	.05	(*)	(*)	(*)		1,063	

TABLE 4.—*Estimated percentage of the total wheat area in the United States occupied by each variety at 5-year intervals since 1919, and the acreage for 1944 and 1949*—Continued

Variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Kanhull						(*)		1,165	
Kanred	0.14	8.48	5.60	4.81	2.41	1.56	0.30	1,023,024	252,049
Karmont		(*)	.14	.15	.18	.29	.60	190,394	511,371
Kawvale				.07	1.91	1.22	.35	804,235	300,594
Kinney	.03	.02	.02	.01		(*)	.01	1,732	5,298
Kitchener		.01	.01	.01	(*)	(*)	(*)	275	1,078
Kofod	.01	.01	(*)	(*)		(*)		1,443	
Komar				.02	.17	.09	.07	61,951	59,991
Kota		.93	.40	.10	.01	.01		4,097	
Kubanka	.07	.94	1.17	1.13	.68	.27	.33	180,217	280,438
Leap	.72	1.01	1.09	1.16	1.05	1.00	.15	659,553	127,489
Leapland					.01	.07	.06	48,861	48,949
Lemhi					(*)	.17	.24	108,374	202,256
Little Club	.15	.04	.03	.05		(*)		2,945	
Lofthouse	.01	(*)	.01	.01	.01	.01	(*)	6,359	1,705
Major				(*)	.01	.01	(*)	6,018	1,474
Mammoth Red	.01	.01	.09	.07	.04	.04	.01	28,047	8,323
Marfed							.04		31,998
Marmin						.01	.03	3,240	21,356
Marquillo			.02	.22	.22	.03	(*)	16,958	1,053
Marquis	16.10	18.89	19.02	13.96	5.05	2.33	1.04	1,529,428	882,382
Marvel			.01	.02	.05	.03		17,000	
Mealy	.09	.02	.01	(*)	(*)	(*)		2,748	
Mediterranean	3.80	1.18	.88	.85	.61	.50	.30	331,228	252,145
Mercury						(*)		70	
Michikof		.10	.22	.15	.15	.05	(*)	32,341	580
Mida						.03	6.54	18,552	5,554,156
Mindum		.02	.52	.73	1.18	1.03	1.15	678,486	980,677
Minter							.02		14,429
Minturki		.07	.14	.27	.24	.25	.04	164,602	32,591
Moking							(*)		2,200
Montana No. 36	(*)	.04	.05	.03	.04	.02	.02	15,256	15,952
Mosida			.02	.03	.04	.06	.02	42,389	14,335
Nabob			(*)	(*)	.01	(*)	(*)	412	681
Nebraska No. 60		.03	.56	1.07	.67	.29	.05	187,464	39,717
Nebred					.01	.88	1.72	580,954	1,457,375
Newcaster							.05		42,814
Newthatch						(*)	.33	2,217	282,076
Newturk			.02	.04	.08	.09	.10	59,023	82,045
Nigger	.38	.39	.20	.25	.19	.12	.14	81,650	116,191
Nittany		.51	.64	.67	.79	.70	.13	461,762	110,369
Nodak		(*)	.06	.03	.01		(*)		240
Nudel							(*)		692
Nured						.03	.02	19,380	19,257
Oakley	(*)	(*)	(*)		(*)	(*)		2,531	
Odessa	.07	.04	.01	.01	(*)	(*)		433	
Onas			.03	.05	.06	.07	.06	48,573	49,661
Oregon Zimmerman			.01	.02	.03	.02	.03	12,466	21,309
Orfed						(*)	.21	618	182,652
Orienta							(*)		810
Oro			(*)	.01	.08	.02		10,857	
Pacific Bluestem	1.87	.73	.59	.27	.20	.08	.01	52,859	11,007
Pacific Bluestem 37					(*)	.02	.03	12,628	26,773
Pawnee						.02	13.09	11,200	11,120,653
Peliss	(*)	.01	.01	.04	.02	.12	.02	77,022	13,478
Pentad	.07	.67	1.62	.51	.96	.30	.34	196,405	288,762
Pilcraw	(*)		.02	.04	.04	.02	(*)	15,227	2,138
Pilot					(*)	1.85	.67	1,217,009	570,675
Poole	3.37	2.06	.97	1.10	.58	.32	.05	208,188	44,122
Portage	.01	.11	.02	.04	.01	(*)		524	
Poso				(*)	.04	.01		7,348	
Poso 44							.02		14,984
Prairie						(*)	.05	244	44,945
Premier						.04	.19	27,543	165,614
Preston	3.06	.77	.46	.21	.03	(*)		2,700	
Progress		(*)	.05	.15	.09	.03	(*)	18,677	1,504
Prohibition	.03	.03	.01	.01			(*)		1,583
Prosperity	.06	(*)	.01	.01	.03	(*)	(*)	2,909	3,038
Purdue No. 1				(*)	.08	.06	(*)	36,651	1,148
Purkof			.32	.49	.56	.24	.07	158,753	62,835
Purplestraw	.38	.23	.24	.50	.47	.46	.12	303,426	100,692
Ramona				(*)	.01	.02		14,854	
Ramona 44							.22		189,967
Red Bobs		.03	.03	.01	.02	.01	(*)	5,248	4,851
Redchaff	.05	.01	.01	.01	.01	(*)		2,259	

TABLE 4.—*Estimated percentage of the total wheat area in the United States occupied by each variety at 5-year intervals since 1919, and the acreage for 1944 and 1949*—Continued

Variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Red Chief						1.24	1.37	817,562	1,160,893
Red Clawson	0.11	0.04	0.02	0.03	0.02	(*)		2,790	
Red Fife	1.03	.34	.05	.03	.01	(*)		445	
Redhart			(*)	.19	.43	1.05	0.71	690,421	604,62
Redhull			.01	.14	.24	.05	.02	36,108	15,285
Red Indian		(*)			.01	(*)	(*)	638	91
Redman							.16		136,057
Red May	1.60	.79	1.29	1.60	.93	.58	.17	378,079	139,723
Red Rock	.30	.67	.42	.36	.25	.25	.02	163,212	14,266
Red Russian	.21	.10	.09	.04	.02	.03	.01	21,880	9,139
Red Wave	1.53	.86	.41	.50	.26	.18	.01	121,278	10,290
Regent						2.03	.52	1,333,725	441,392
Reliance			(*)	(*)		(*)		1,659	
Reliant						.01	(*)	6,022	2,430
Relief				(*)	.14	.03	.01	20,375	5,056
Renown					.08	.83	.02	542,329	20,376
Requa					(*)	.01	.13	4,424	112,060
Rescue							1.08		916,147
Reward			.01	.38	.31	.36	.12	236,943	98,271
Rex					.58	.68	.50	449,787	427,413
Rice	.04	.11	.01	.02	.06	.02	.01	10,793	11,114
Ridit		(*)	.27	.26	.21	.08	.09	49,201	75,027
Rink	.02	.04	.05	.01	.01	(*)	(*)	1,614	959
Rio				(*)	.03	.05	.14	29,979	114,948
Rival					(*)	6.17	3.45	4,050,900	2,930,903
Royal							.10		85,384
Ruby		.65	.30	.13	.01	.01		3,819	
Rudy	.56	.49	.31	.35	.36	.31	.19	203,345	163,777
Rushmore							.02		16,031
Russian		.04	.03	.01	.04	.04		24,278	
Russian Red	.24	.10	.10	.05	.01	.07	(*)	46,067	335
Sanett						(*)	.01	482	5,513
Sanford						.05	.20	33,970	164,871
Seabreeze							.01		6,750
Sevier	(*)	(*)	(*)	(*)	(*)	(*)	(*)	875	1,002
Sherman			(*)	.01	(*)	(*)	.05	1,824	39,490
Sibley 81				.04	.12	(*)	.01	1,500	7,000
Silvercoin	(*)	(*)	.01	(*)		.01	(*)	7,215	286
Sonora	.37	.17	.15	.08	.04	.02	(*)	15,921	2,285
Spinkcota							.02		15,197
Squareheads Master				(*)	(*)	(*)		2,194	
Stanley						(*)		235	
Stewart						.02	1.58	12,389	1,344,158
Sturgeon				(*)	.01	.01	(*)	5,090	1,071
Supreme			.48	.31	.17	.07	.09	48,509	74,386
Surprise	.08	.03	.04	.01	(*)	(*)		71	
Tenmarq				.29	5.51	13.31	3.42	8,744,053	2,902,645
Thatcher				(*)	8.64	6.78	3.97	4,450,254	3,370,823
Thorne					.01	2.42	4.06	1,587,783	3,447,661
Touse	.03	.02	.01	(*)	(*)	(*)		1,073	
Triplet		.20	.27	.20	.15	.07	.05	43,882	44,248
Triumph						.11	6.59	72,459	5,596,200
Trumbull	(*)	1.17	1.46	1.86	2.01	.90	.36	590,448	300,954
Turkey	29.63	28.18	25.69	24.80	19.77	12.63	3.90	8,295,881	3,311,617
Ukrainka				(*)	.01	(*)		1,340	
Utac			(*)	(*)	.01	.01	(*)	4,291	501
Utah Kanred			.03	.04	.08	.03	.05	21,273	42,962
Vahart							.07		60,991
Valley	.01	.01	(*)	.01	.01		(*)		464
Valprize				.01	.03	(*)	(*)	2,722	918
Vernum							.02		13,392
Vesta						.59	.13	386,057	106,062
Vigo							.53		452,427
V. P. I. 112			.05	.02	.01	.01		4,201	
V. P. I. 131			.13	.18	.15	.16	.10	103,258	81,402
Wabash					(*)	.07	.03	46,806	22,875
Wasatch						(*)	.46	2,992	393,788
Westar							2.56		2,169,798
Wheedling	.01	.01	(*)	.01		(*)		1,350	
White Federation		(*)	.06	.17	.36	.07	.01	47,978	5,417
White Federation 38						.30	.28	197,840	241,675
White Fife	(*)					(*)		83	
White Winter	.07	.06	.04	.03	.04	.05	(*)	32,612	3,829
Wichita							3.54		3,004,432

TABLE 4.—*Estimated percentage of the total wheat area in the United States occupied by each variety at 5-year intervals since 1919, and the acreage for 1944 and 1949*—Continued

Variety	Percentage							Acreage	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Wilhelmina	------	------	0.04	0.06	0.06	0.09	0.06	57,003	53,136
Wisconsin Ped. No. 2	0.01	0.01	.01	(*)	.02	.01	(*)	3,182	615
Yogo	------	------	------	------	.05	.23	.66	150,924	562,186
Yorkwin	------	------	------	------	.19	.69	1.30	452,777	1,107,530
Others and not reported	7.49	4.26	2.84	2.40	1.94	.81	1.33	532,424	1,128,053
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00	65,684,000	84,931,000

5 million acres, Thorne, Thatcher, Turkey, and Wichita, each on more than 3 million acres, and Rival, Tenmarq, Westar, and Early Blackhull, each on more than 2 million acres. Acreages of less than 100,000 were reported for 122 of the 199 varieties grown.

There was a gradual increase in the number of varieties reported in the surveys from 1924 to 1944. This was a result of the distribution of improved varieties, many of which became widely adopted and were grown on large acreages, while small acreages of many of the older varieties remained. The 1949 survey shows that some of the older varieties are being eliminated. Of the 19 varieties grown on more than one million acres in 1949, only 8 were grown on more than a million acres in 1944.

As the farm lands of this country become older, changing factors affect the production of a crop like wheat, which is a major crop and in some cases about the only crop grown over large areas. In these areas wheat may follow wheat every year or it may be alternated with summer fallow in a rotation. Sometimes it follows a year of corn or sorghum in a short rotation. Such conditions are favorable for the increase, in the soil, of weak parasitic micro-organisms to the point where they may cause serious diseases such as foot and root rots. Obligate parasites such as the rusts and smuts on wheat may increase rapidly, or particular races of these organisms also may increase rapidly if a single variety or varieties of similar parentage are grown over large concentrated acreages. Fertility levels and soil moisture relations also change and result in changes in the physiology of the wheat plant, which may predispose it to diseases. Varieties of wheat differ markedly in their resistance or susceptibility to these conditions as well as to air- or seed-borne diseases.

Varieties bred for resistance to a disease often are not resistant to all races of the disease. However, resistance to some of the races often prevents serious losses. If an improved variety is susceptible even to a single race of a seed-borne disease and spores or fungal parts of that race are present on or within the seed as it is increased for distribution to farmers, it may be very widely disseminated and cause serious losses. It is imperative that seed for foundation stocks be carefully treated to avoid any trace of seed-borne diseases.

In the case of such wind-borne diseases as rust, a wheat resistant to all but a single race may serve to increase the inoculum of that race to disastrous proportions if the variety is extensively grown over large areas. This is what happened when wheat varieties with the Hope type of re-

TABLE 5.—*Varieties of wheat grown on more than a million acres, listed in order of acreage at 5-year intervals since 1919*

Rank	1919	1924	1929	1934	1939	1944	1949
1	Turkey	Turkey	Turkey	Turkey	Turkey	Tenmarq	Pawnee
2	Marquis	Marquis	Marquis	Marquis	Blackhull	Turkey	Comanche
3	Fultz	Kanred	Blackhull	Blackhull	Thatcher	Blackhull	Triumph
4	Mediterranean	Fulcaster	Kanred	Ceres	Ceres	Thatcher	Mida
5	Fulcaster	Fultz	Fultz	Kanred	Tenmarq	Rival	Thorne
6	Poole	Blackhull	Fulcaster	Fultz	Marquis	Chiefkan	Thatcher
7	Preston	Poole	Pentad	Fulcaster	Kanred	Early Blackhull	Turkey
8	Haynes Bluestem			Trumbull	Fultz	Ceres	Wichita
9	Pacific Bluestem				Trumbull	Thorne	Rival
10	Red May				Fulcaster	Marquis	Tenmarq
11	Red Wave				Kawvale	Cheyenne	Westar
12	Harvest Queen					Regent	Early Blackhull
13						Pilot	Cheyenne
14						Fultz	Blackhull
15						Kanred	Nebred
16							Stewart
17							Red Chief
18							Ceres
19							Yorkwin

sistance to leaf rust were distributed from Texas to Canada. They were resistant to the races that had predominated at the time they were distributed, but were susceptible to a few formerly very rare races. When these varieties, all susceptible to the same "minor" races of leaf rust, became widely grown these "minor" races became of major importance. Had fundamental pathologic information on the leaf rust disease been sufficient for the planning of a sound breeding project, varieties with more adequate resistance could have been developed.

With the recognition of these disease, fertility, and soil moisture relations that might favor the increase and dissemination of some new hazard, it is questionable whether it is desirable to encourage the rapid increase of any one variety or closely related varieties to a large part of the acreage of a region. It is safer to grow two or more varieties of different parentage so that if one succumbs to a new disease or new races of an old disease, the others may remain resistant.

CLASSES OF WHEAT

According to the official grain standards of the United States, wheat is now separated into seven commercial classes: (1) Hard red spring, (2) durum, (3) red durum, (4) hard red winter, (5) soft red winter, (6) white, and (7) mixed wheat. Most of the classes have two or three subclasses, and each subclass has five numerical grades and a sample grade. All varieties are included in one or another of the seven classes. In order to show the relative importance and distribution of the different classes, the acreages of the varieties making up each class were totaled. In this report the durum and red durum acreages are tabulated together, as only a small acreage of one variety of red durum is grown. The acreage for 1949 of each class and its percentage of the entire wheat acreage for each crop-reporting district and each State, arranged by geographical divisions, are shown in table 6 and summarized in table 7. The location and number of each crop-reporting district is shown in figure 2.

TABLE 6.—*Estimated acreage and percentage of the total wheat area occupied by each of the classes of wheat grown in each district and State in 1949*

[The asterisk (*) indicates a class reported as grown but occupying less than 0.1 percent of the total wheat acreage of the district or State]

Division, State, and district	Hard red spring		Durum and red durum		Hard red winter		Soft red winter		White		Total acreage
	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	
North Atlantic:											
New York:											
2							443	23.3	1,457	76.7	1,900
3									400	100.0	400
4	288	0.1			1,152	0.4	1,152	.4	285,408	99.1	288,000
5	124	.2			311	.5	869	1.4	60,796	97.9	62,100
6	71	.7			82	.8	1,367	13.4	8,680	85.1	10,200
7					352	1.5	682	2.9	22,466	95.6	23,500

TABLE 6.—*Estimated acreage and percentage of the total wheat area occupied by each of the classes of wheat grown in each district and State in 1949*—Continued

Division, State, and district	Hard red spring		Durum and red durum		Hard red winter		Soft red winter		White		Total acreage
	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	
North Atlantic—New York—Continued											
8					421	1.4	4,395	14.6	25,284	84.0	30,100
9	101	1.2			59	.7	252	3.0	7,988	95.1	8,400
9A	176	4.0					1,566	35.6	2,658	60.4	4,400
Total	760	.2			2,377	.6	10,726	2.5	415,137	96.7	429,000
New Jersey:											
2					203	.7	26,506	91.4	2,291	7.9	29,000
5							63,000	100.0			63,000
8							14,700	98.0	300	2.0	15,000
Total					203	.2	104,206	97.4	2,591	2.4	107,000
Pennsylvania:											
1					81	.2	38,055	93.5	2,564	6.3	40,700
2					1,648	4.5	27,318	74.6	7,654	20.9	36,620
3					397	19.1	495	23.8	1,188	57.1	2,080
4	448	.5			179	.2	87,222	97.4	1,701	1.9	89,550
5					2,534	1.3	191,401	98.2	975	.5	194,910
6	478	.7			2,461	3.6	59,738	87.4	5,673	8.3	68,350
7					1,104	1.9	55,660	95.8	1,336	2.3	58,100
8					5,386	2.3	226,228	96.6	2,576	1.1	234,190
9					4,653	2.2	201,983	95.5	4,864	2.3	211,500
Total	926	.1			18,443	2.0	888,100	94.9	28,531	3.0	936,000
North Central: Ohio:											
1					4,590	1.0	410,805	89.5	43,605	9.5	459,000
2	665	.2			998	.3	329,274	99.0	1,663	.5	332,600
3					926	.4	228,292	98.7	2,082	.9	231,300
4	340	.1			1,702	.5	327,806	96.3	10,552	3.1	340,400
5					9,290	2.0	453,816	97.7	1,394	.3	464,500
6					797	.8	98,604	99.0	199	.2	99,600
7					2,016	.8	250,084	99.2			252,100
8					2,360	2.1	108,691	96.7	1,349	1.2	112,400
9							84,504	99.3	596	.7	85,100
Total	1,005	(*)			22,679	1.0	2,291,876	96.4	61,440	2.6	2,377,000
Indiana:											
1					3,960	2.4	161,040	97.6			165,000
2	808	0.4			8,484	4.2	192,708	95.4			202,000
3					5,824	2.8	200,928	96.6	1,248	.6	208,000
4					12,338	6.2	186,662	93.8			199,000
5					23,400	6.0	361,530	92.7	5,070	1.3	390,000
6					1,476	.9	161,376	98.4	1,148	.7	164,000
7							248,000	100.0			248,000
8					2,150	2.5	83,850	97.5			86,000
9					5,085	4.5	107,915	95.5			113,000
Total	808	(*)			62,717	3.5	1,704,009	96.1	7,466	.4	1,775,000
Illinois:											
1	4,473	19.2			10,811	46.4	6,222	26.7	1,794	7.7	23,300
3	1,318	4.5			25,345	86.5	2,168	7.4	469	1.6	29,300
4					135,256	69.9	58,050	30.0	194	.1	193,500
4A					265,895	53.5	231,105	46.5			497,000
5					161,455	79.3	42,145	20.7			203,600
6					70,190	60.3	46,210	39.7			116,400
6A					143,068	40.9	201,485	57.6	5,247	1.5	349,800
7					23,870	5.5	407,526	93.9	2,604	.6	434,000
9					17,018	8.1	193,082	91.9			210,100
Total	5,791	.3			852,908	41.5	1,187,993	57.7	10,308	.5	2,057,000
Michigan:											
1	2,256	37.6			1,678	28.0	1,687	28.1	379	6.3	6,000
2	286	1.7			628	3.7	362	2.1	15,724	92.5	17,000
3	432	1.6			1,431	5.3	486	1.8	24,651	91.3	27,000

TABLE 6.—*Estimated acreage and percentage of the total wheat area occupied by each of the classes of wheat grown in each district and State in 1949*—Continued

Division, State, and district	Hard red spring		Durum and red durum		Hard red winter		Soft red winter		White		Total Acreage
	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	
North Central—Michigan—Continued											
4					628	2.9	749	3.4	20,623	93.7	22,000
5	448	0.4			3,136	2.8	784	.7	107,632	96.1	112,000
6					2,040	.8	4,590	1.8	248,370	97.4	255,000
7					3,597	1.9	43,183	23.2	139,220	74.9	186,000
8					5,321	1.4	55,858	14.1	333,821	84.5	395,000
9					4,754	1.7	40,247	14.2	237,999	84.1	283,000
Total	3,422	.3			23,213	1.8	147,946	11.3	1,128,419	86.6	1,303,000
Wisconsin:											
1	1,845	37.9			2,017	41.4	1,008	20.7			4,870
2	2,883	63.5			268	5.9	1,298	28.6	91	2.0	4,540
3	3,129	49.2			363	5.7	2,773	43.6	95	1.5	6,360
4	14,799	68.8			753	3.5	5,958	27.7			21,510
5	8,654	73.4					3,077	26.1	59	.5	11,790
6	15,866	87.8			289	1.6	1,915	10.6			18,070
7	9,789	82.4			95	.8	1,996	16.8			11,880
8	18,333	86.6					2,710	12.8	127	.6	21,170
9	10,337	69.8			237	1.6	4,236	28.6			14,810
Total	85,635	74.5			4,022	3.5	24,971	21.7	372	.3	115,000
Minnesota:											
1	713,424	89.0	77,755	9.7	10,421	1.3					801,600
2	13,379	88.6	302	2.0	1,344	8.9	75	.5			15,100
3	200	100.0									200
4	268,993	86.8	20,453	6.6	16,115	5.2	4,339	1.4			309,900
5	61,367	79.8	1,307	1.7	11,227	14.6	2,999	3.9			76,900
6	6,889	75.7	564	6.2	1,237	13.6	410	4.5			9,100
7	20,826	98.7	105	.5	169	.8					21,100
8	16,964	58.9	403	1.4	9,878	34.3	1,555	5.4			28,800
9	30,436	81.6	448	1.2	5,931	15.9	485	1.3			37,300
Total	1,132,478	87.1	101,337	7.8	56,322	4.3	9,863	.8			1,300,000
Iowa:											
1	7,224	44.4			9,046	55.6					16,270
2	2,262	75.4			738	24.6					3,000
3	5,762	69.0			2,588	31.0					8,350
4	20,969	12.3			149,351	87.6	170	.1			170,490
5	1,040	5.1			19,003	93.2	347	1.7			20,390
6					8,955	90.0	995	10.0			9,950
7	1,411	1.4			99,339	98.6					100,750
8	248	.5			49,302	99.5					49,550
9	1,479	2.2			65,771	97.8					67,250
Total	40,395	9.1			404,093	90.6	1,512	.3			446,000
Missouri:											
1					281,400	84.0	53,600	16.0			335,000
2					162,960	77.6	46,830	22.3	210	.1	210,000
3					52,960	33.1	107,040	66.9			160,000
4					246,840	72.6	93,160	27.4			340,000
5					144,130	40.6	210,870	59.4			355,000
6					19,765	5.9	315,235	94.1			335,000
7					96,240	40.1	143,760	59.9			240,000
8					1,820	2.8	63,180	97.2			65,000
9					8,330	9.8	76,670	90.2			85,000
Total					1,014,445	47.7	1,110,345	52.3	210	(*)	2,125,000
North Dakota:											
1	1,361,814	86.3	213,030	13.5	3,156	.2					1,578,000
2	640,755	49.1	664,245	50.9							1,305,000
3	776,516	43.6	1,004,484	56.4							1,781,000
4	975,875	92.5	79,125	7.5							1,055,000
5	715,310	61.4	449,690	38.6							1,165,000
6	782,340	78.0	220,660	22.0							1,003,000
7	1,087,370	97.0	33,630	3.0							1,121,000
8	817,167	91.1	79,833	8.9							897,000
9	732,122	70.6	300,730	29.0	4,148	.4					1,037,000
Total	7,889,269	72.1	3,045,427	27.8	7,304	.1					10,942,000

TABLE 6.—*Estimated acreage and percentage of the total wheat area occupied by each of the classes of wheat grown in each district and State in 1949*—Continued

Division, State, and district	Hard red spring		Durum and red durum		Hard red winter		Soft red winter		White		Total acreage
	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	
North Central—Continued											
South Dakota:											
1	557,012	99.1			5,058	0.9					562,070
2	1,420,210	95.4	64,014	4.3	4,466	.3					1,488,690
3	354,573	66.1	178,629	33.3	3,218	.6					536,420
4	266,589	90.8	13,799	4.7	13,212	4.5					293,600
5	525,268	93.9	1,678	.3	32,444	5.8					559,390
6	159,729	90.1	15,955	9.0	1,596	.9					177,280
7	61,259	39.2	156	.1	94,855	60.7					156,270
8	233,347	53.4	96,573	22.1	107,060	24.5					436,980
9	116,874	74.3			40,111	25.5			315	0.2	157,300
Total	3,694,861	84.6	370,804	8.5	302,020	6.9			315	(*)	4,368,000
Nebraska:											
1	48,115	4.8			954,285	95.2					1,002,400
2	4,767	12.1			34,633	87.9					39,400
3	1,384	1.9			70,906	97.4	510	.7			72,800
5					319,700	100.0					319,700
6					793,300	100.0					793,300
7					876,900	100.0					876,900
8	657	.1			656,643	99.9					657,300
9					923,276	99.9	924	.1			924,200
Total	54,923	1.2			4,629,643	98.8	1,434	(*)			4,686,000
Kansas:											
1					1,594,000	100.0					1,594,000
2					1,931,459	99.1	17,541	.9			1,949,000
3					534,831	93.6	36,569	6.4			571,400
4					1,799,000	100.0					1,799,000
5					2,508,924	99.6	10,076	.4			2,519,000
6					580,623	92.5	47,077	7.5			627,700
7					3,040,000	100.0					3,040,000
8					3,368,628	99.9	3,372	.1			3,372,000
9					702,429	91.0	69,471	9.0			771,900
Total					16,059,894	98.9	184,106	1.1			16,244,000
South Atlantic:											
Delaware:											
2							23,907	96.4	893	3.6	24,800
5							31,500	100.0			31,500
8							11,700	100.0			11,700
Total							67,107	98.7	893	1.3	68,000
Maryland:											
1							6,700	100.0			6,700
2					275	.1	275,025	99.9			275,300
8							34,000	100.0			34,000
9					140	.2	69,860	99.8			70,000
Total					415	.1	385,585	99.9			386,000
Virginia:											
2							127,488	99.6	512	.4	128,000
4							51,000	100.0			51,000
5							118,000	100.0			118,000
6							47,000	100.0			47,000
7							71,000	100.0			71,000
8							66,000	100.0			66,000
9							26,000	100.0			26,000
Total							506,488	99.9	512	.1	507,000
West Virginia:											
2							15,000	100.0			15,000
4							16,000	100.0			16,000
6							62,000	100.0			62,000
Total							93,000	100.0			93,000

TABLE 6.—*Estimated acreage and percentage of the total wheat area occupied by each of the classes of wheat grown in each district and State in 1949*—Continued

Division, State, and district	Hard red spring		Durum and red durum		Hard red winter		Soft red winter		White		Total acreage
	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	
South Atlantic—Continued											
North Carolina:											
1							20,500	100.0			20,500
2							88,167	97.1	2,633	2.9	90,800
3							14,000	100.0			14,000
4							28,200	100.0			28,200
5							132,000	100.0			132,000
6							22,500	100.0			22,500
8							158,500	100.0			158,500
9							45,500	100.0			45,500
Total							509,367	99.5	2,633	.5	512,000
South Carolina:											
1							97,000	100.0			97,000
2							12,500	100.0			12,500
3							28,500	100.0			28,500
4							29,000	100.0			29,000
5							29,000	100.0			29,000
8							7,000	100.0			7,000
Total							203,000	100.0			203,000
Georgia:											
1							8,300	100.0			8,300
2							44,600	100.0			44,600
3							46,100	100.0			46,100
4							39,400	100.0			39,400
5							36,000	100.0			36,000
6							20,600	100.0			20,600
7							7,100	100.0			7,100
8							2,600	100.0			2,600
9							300	100.0			300
Total							205,000	100.0			205,000
South Central:											
Kentucky:											
1							46,000	100.0			46,000
2					384	.3	127,616	99.7			128,000
3							96,400	96.4	3,600	3.6	100,000
4							32,000	100.0			32,000
5					5,194	5.3	92,806	94.7			98,000
6							16,000	100.0			16,000
Total					5,578	1.3	410,822	97.8	3,600	.9	420,000
Tennessee:											
1							9,000	100.0			9,000
2							9,500	100.0			9,500
3					855	1.5	56,145	98.5			57,000
4							85,500	100.0			85,500
5							35,000	100.0			35,000
6							131,000	100.0			131,000
Total					855	.3	326,145	99.7			327,000
Alabama:											
1							700	100.0			700
2							9,600	100.0			9,600
2A							600	100.0			600
3							2,200	100.0			2,200
5							300	100.0			300
6							1,600	100.0			1,600
Total							15,000	100.0			15,000
Mississippi:											
1							7,800	100.0			7,800
2							700	100.0			700
3							500	100.0			500
4							5,300	100.0			5,300
5							500	100.0			500
6							700	100.0			700

TABLE 6.—*Estimated acreage and percentage of the total wheat area occupied by each of the classes of wheat grown in each district and State in 1949*—Continued

Division, State, and district	Hard red spring		Durum and red durum		Hard red winter		Soft red winter		White		Total Acreage
	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	
South Central—Continued											
Mississippi–Con.											
7							300	100.0			300
8							100	100.0			100
9							100	100.0			100
Total							16,000	100.0			16,000
Arkansas:											
1							7,000	100.0			7,000
2							3,600	100.0			3,600
3					113	0.6	17,387	99.4			17,500
4							1,800	100.0			1,800
5							1,800	100.0			1,800
6							3,300	100.0			3,300
7							1,100	100.0			1,100
9							900	100.0			900
Total					113	.3	36,887	99.7			37,000
Oklahoma:											
1					1,700,000	100.0					1,700,000
2					2,195,600	99.8	4,400	0.2			2,200,000
3					160,395	86.7	24,605	13.3			185,000
4					1,180,000	100.0					1,180,000
5					807,570	99.7	2,430	.3			810,000
6					12,176	76.1	3,824	23.9			16,000
7	1,400	0.1			1,398,600	99.9					1,400,000
8					50,569	82.9	10,431	17.1			61,000
Total	1,400	(*)			7,504,910	99.5	45,690	.5			7,552,000
Texas:											
1-N					4,794,597	99.1	5,403	.1			4,800,000
1-S					230,000	100.0					230,000
2					1,560,580	99.4	9,420	.6			1,570,000
3					439,300	95.5	20,700	4.5			460,000
4			23,460	5.1	121,440	26.4	315,100	68.5			460,000
7			2,100	1.4	77,400	51.6	70,500	47.0			150,000
8							27,000	100.0			27,000
Total			25,560	.3	7,223,317	93.9	448,123	5.8			7,697,000
Western:											
Montana:											
1	40,005	31.5			60,325	47.5	3,429	2.7	23,241	18.3	127,000
2	1,452,360	66.5			727,272	33.3			4,368	.2	2,184,000
3	1,911,935	98.3	27,230	1.4	5,835	.3					1,945,000
5	255,084	34.8	733	.1	476,450	65.0			733	.1	733,000
7	105,458	78.7	134	.1	27,470	20.5			938	.7	134,000
8	94,365	23.3	3,645	.9	300,915	74.3			6,075	1.5	405,000
9	325,458	86.1	756	.2	50,274	13.3			1,512	.4	378,000
Total	4,184,665	70.8	32,498	.6	1,648,541	27.9	3,429	.1	36,867	.6	5,906,000
Idaho:											
1	7,104	1.7			18,952	4.5	7,292	1.7	389,652	92.1	423,000
7	4,153	4.3			10,978	11.4			80,869	84.3	96,000
8	5,266	2.5			96,971	46.6	111	.1	105,652	50.8	208,000
9	61,131	7.0			545,093	62.7	1,820	.2	261,956	30.1	870,000
Total	77,654	4.9			671,994	42.1	9,223	.5	838,129	52.5	1,597,000
Wyoming:											
1	13,518	75.1			3,636	20.2			846	4.7	18,000
2	39,250	31.4			85,750	68.6					125,000
3	6,720	67.2			3,280	32.8					10,000
4	5,592	46.6			6,408	53.4					12,000
5	15,708	6.6	3,570	1.5	218,722	91.9					238,000
Total	80,788	20.0	3,570	.9	317,796	78.9			846	.2	403,000

TABLE 6.—*Estimated acreage and percentage of the total wheat area occupied by each of the classes of wheat grown in each district and State in 1949*—Continued

Division, State, and district	Hard red spring		Durum and red durum		Hard red winter		Soft red winter		White		Total acreage
	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	Acreage	Percent	
Western—Con.											
Colorado:											
1	21,528	27.6			56,160	72.0			312	0.4	78,000
2	55,760	8.2			620,160	91.2			4,080	.6	680,000
6	224,870	11.3			1,765,130	88.7					1,990,000
7	7,154	7.3			82,124	83.8	1,176	1.2	7,546	7.7	98,000
8	26,000	100.0									26,000
9	2,250	.3			747,750	99.7					750,000
Total	337,562	9.3			3,271,324	90.3	1,176	(*)	11,938	.4	3,622,000
New Mexico:											
1	2,952	8.2			27,072	75.2	5,940	16.5	36	.1	36,000
3	24,432	4.8			484,059	95.1	509	.1			509,000
7	1,500	25.0			4,500	75.0					6,000
9					3,000	100.0					3,000
Total	28,884	5.2			518,631	93.6	6,449	1.2	36	(*)	554,000
Arizona:											
2					4,832	65.3			2,568	34.7	7,400
5									17,900	100.0	17,900
7									1,700	100.0	1,700
9					1,362	45.4			1,638	54.6	3,000
Total					6,194	20.6			23,806	79.4	30,000
Utah:											
1	693	.3			198,285	85.8			32,122	13.9	231,100
5					95,777	76.5			29,423	23.5	125,200
6					45,051	78.9			12,049	21.1	57,100
7					17,140	62.1			10,460	37.9	27,600
Total	693	.1			356,253	80.8			84,054	19.1	441,000
Nevada:											
1	93	.5			2,872	15.5			15,565	84.0	18,530
3									4,940	100.0	4,940
8					93	6.1			1,437	93.9	1,530
Total	93	.4			2,965	11.9			21,942	87.7	25,000
Washington:											
1	1,922	24.0			78	1.0	4,859	60.7	1,141	14.3	8,000
2	6,329	1.7			55,751	15.1	2,248	.6	305,672	82.6	370,000
3	730	.4			9,883	4.9	12,233	6.1	177,154	88.6	200,000
5	38,616	2.5			881,949	58.1	1,438	.1	595,997	39.3	1,518,000
9	1,055	.1			58,292	5.5	24,357	2.3	978,296	92.1	1,062,000
Total	48,652	1.6			1,005,953	31.8	45,135	1.4	2,058,260	65.2	3,158,000
Oregon:											
1	16,828	16.3			428	.4	1,718	1.7	83,906	81.6	102,880
2					15,440	2.9	13	(*)	509,607	97.1	525,060
3	646	.1			3,767	.9			440,487	99.0	444,900
7	634	8.1							7,226	91.9	7,860
8	1,681	1.3			26,615	21.1	155	.1	97,849	77.5	126,300
Total	19,789	1.6			46,250	3.8	1,886	.2	1,139,075	94.4	1,207,000
California:											
1									1,400	100.0	1,400
2									39,400	100.0	39,400
3					1,375	3.4			39,625	96.6	41,000
4									183,500	100.0	183,500
5									131,100	100.0	131,100
5A									231,900	100.0	231,900
6									18,800	100.0	18,800
8									92,900	100.0	92,900
Total					1,375	.2			738,625	99.8	740,000

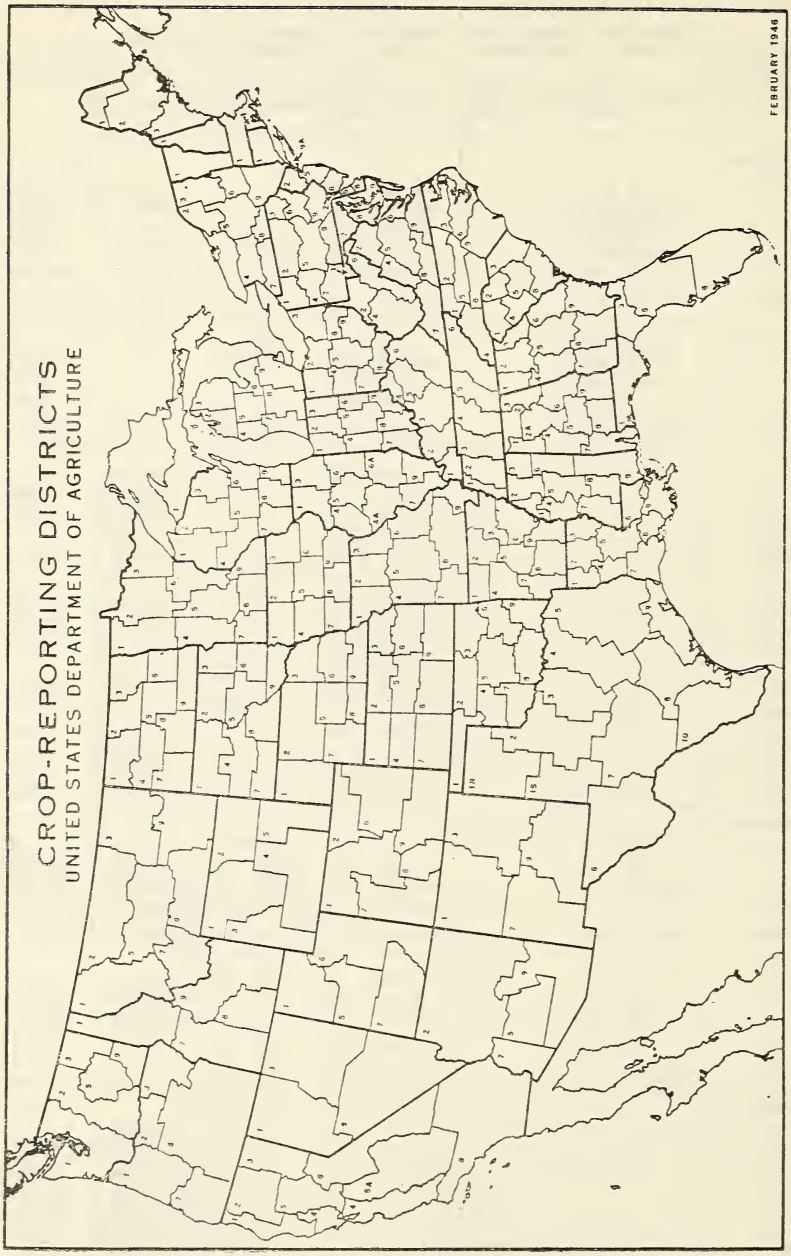

FIGURE 2.—Crop-reporting districts in 1949 within the States of the United States.

In table 6 the acreage of "Others and not reported" is distributed among the classes in proportions determined by the class acreages based on varieties reported; thus the total wheat acreage of each State was accounted for. This distribution was made by crop-reporting districts.

TABLE 7.—*Estimated percentage of the total wheat acreage of the United States occupied by each of the 5 classes of wheat at 5-year intervals since 1919, and the estimated acreage for 1944 and 1949*

Class	Percentage of total wheat acreage for the years—							Estimated acreage for the years—	
	1919	1924	1929	1934	1939	1944	1949	1944	1949
Hard red spring	24.2	22.4	22.0	23.2	20.9	24.0	20.8	15,765,582	17,690,458
Durum [1]	6.4	8.2	9.4	4.6	5.3	3.3	4.2	2,179,258	3,579,196
Hard red winter	32.0	41.4	43.5	44.6	47.6	46.8	54.2	30,709,456	46,042,742
Soft red winter	30.1	22.1	17.7	20.9	19.6	18.2	13.0	11,937,179	11,002,599
White	7.3	5.9	7.4	6.7	6.6	7.7	7.8	5,092,525	6,616,005
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	65,684,000	84,931,000

[1] Includes durum and red durum classes.

Hard red spring wheat as a class is grown in all but the South Atlantic and South Central divisions, but principally in the North Central States. In 1949 it was reported in 22 States and was the leading class in Minnesota, North Dakota, South Dakota, and Montana.

Durum wheat is grown principally in North Dakota, South Dakota, and Minnesota. It is not a leading class of wheat in any State, occupying 27.8 percent of the acreage in North Dakota, 8.5 percent of that in South Dakota, and 7.8 percent of that in Minnesota. In addition small acreages of durum wheat were reported in Montana, Texas, and Wyoming.

Hard red winter wheat was reported grown in 30 States in 1949, and its total acreage was more than twice that of any other class of wheat. It is grown principally in the North Central and South Central States and is the leading class of wheat in Kansas, Nebraska, Oklahoma, Texas, Iowa, Wyoming, Colorado, New Mexico, and Utah.

Soft red winter is the leading class of wheat in New Jersey, Pennsylvania, Ohio, Illinois, Indiana, Wisconsin, Missouri, Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Kentucky, Tennessee, Alabama, Arkansas, and Mississippi. In many of the Eastern States it is practically the only class of wheat grown. The largest acreages were estimated for Ohio, Indiana, Missouri, Illinois, and Pennsylvania. A total of 33 States reported soft red winter wheat in 1949.

White wheat is grown chiefly in the far Western States and in New York and Michigan. It is the leading class of wheat in New York and Michigan in the East and in Idaho, Washington, Oregon, California, Arizona, and Nevada in the West. The largest acreages were in Washington, Oregon, Michigan, Idaho, California, and New York.

The estimated acreage and percentage of the total wheat area occupied by each class by 5-year intervals since 1919 are shown in table 7. These acreages were determined by totaling the estimated acreages of the varieties in each class. These data indicate that from 1944 to 1949 there was a decrease in the acreage of soft red winter and an increase in hard red winter, hard red spring, durum, and white wheats. The greatest change was in hard red winter which increased from 30,709,456 acres to

46,042,742 acres. The percentage of hard red winter wheat increased gradually from 1919 until 1949. This has been due largely to increased total acreage of wheat in the central and southern Great Plains area where this class predominates. The acreage of soft red winter wheat has been about constant, but the percentage has decreased. No marked change has occurred in the relative importance of white wheat, which occupied 7.3 percent of the total wheat in 1919 and 7.8 percent in 1949. The shifts in the relative proportion of the different classes of wheat are caused largely by changes in the acreage of all wheat in different areas where the particular classes are grown rather than by major changes in the classes of wheat grown within a locality.

Hard Red Spring Varieties

The hard red spring varieties are grown principally in the north-central part of the United States, their production extending into the prairie Provinces of Canada. There the severe winters make the risks in growing present varieties of winter wheat virtually prohibitive. The States leading in the production of hard red spring wheat are North Dakota, South Dakota, Montana, and Minnesota. Varieties of spring wheat also are grown in certain parts of Wisconsin, Iowa, Illinois, and as far east as Maine. In these States, as well as in Nebraska, Colorado, and Wyoming, they are frequently used to replace winter wheat that has failed, due to winterkilling, drought, soil blowing, or other causes. Hard red spring wheat also occupies a limited acreage in the Pacific Northwest. The distribution of the acreage of hard red spring wheat in 1949 is shown in figure 3.

In 1949, 31 varieties of hard red spring wheat were reported. They are listed in table 8 in order of their estimated acreage, together with 14 varieties reported grown in 1944 but which were not reported in 1949. The percentages of the total acreage for the class occupied by each variety in 1919, 1924, 1929, 1934, 1939, 1944, and 1949 are also shown.

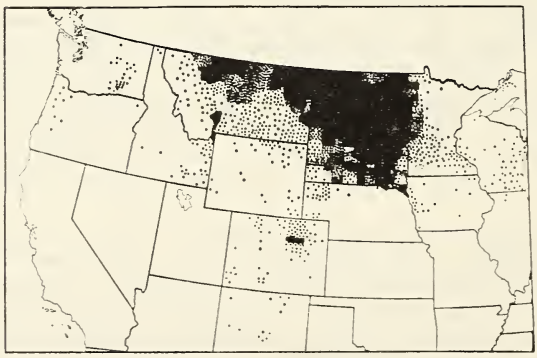

Figure 3.—Distribution of hard red spring wheat in 1949. Estimated area, 17,690,458 acres.

MIDA

Mida increased from 18,552 acres in 1944, when it was released by the North Dakota Agricultural Experiment Station, to 5,554,156 acres in

TABLE 8.—*Percentage of the total hard red spring wheat acreage occupied by each variety of that class in the United States at 5-year intervals since 1919, and the estimated acreage for 1949*

[The asterisk (*) indicates the variety was reported as grown, but the estimate of acreage was less than 0.1 percent of the total acreage of the class]

Variety	Percentage of acreage							Acreage, 1949
	1919	1924	1929	1934	1939	1944	1949	
Mida						0.1	31.4	5,554,156
Thatcher				(*)	41.6	28.3	19.1	3,370,823
Rival					(*)	25.8	16.6	2,930,903
Ceres			2.6	31.5	27.0	10.3	6.7	1,184,625
Rescue							5.2	916,147
Marquis	71.4	85.4	87.4	60.2	24.3	9.7	5.0	882,382
Cadet							3.5	626,282
Pilot					(*)	7.7	3.2	570,675
Regent						8.5	2.5	441,392
Newthatch						(*)	1.6	282,076
Henry						(*)	1.0	168,679
Premier						.2	1.0	165,614
Redman							.8	136,057
Vesta						2.5	.6	106,062
Reward			.1	1.6	1.5	1.5	.6	98,271
Supreme			2.2	1.3	.8	.3	.4	74,386
Komar				.1	.8	.4	.3	59,991
Renown					.4	3.5	.1	20,376
Rushmore							.1	16,031
Spinkcota							.1	15,197
Canus						(*)	.1	13,104
Carleeds					.7	.3	.1	8,004
Apex					(*)	.2	(*)	7,220
Kinney	.2	.1	.1	.1		(*)	(*)	5,298
Red Bobs		.1	.1	.1	.1	.1	(*)	4,851
Huston	.1	.2	.1	.1	.1	(*)	(*)	4,687
Progress		(*)	.2	.7	.4	.1	(*)	1,504
Kitchener		(*)	(*)	(*)	(*)	(*)	(*)	1,078
Sturgeon				(*)	(*)	(*)	(*)	1,071
Marquillo			.1	1.0	1.1	.1	(*)	1,053
Comet							(*)	1,000
Garnet			.1	.1	(*)	(*)		
Great Northern					.1	.2		
Marvel			(*)	.1	.3	.1		
Java	.1	.1	.1	.1	.2	.1		
Kota		4.2	1.9	.4	.1	(*)		
Ruby		2.9	1.4	.5	(*)	(*)		
Preston	13.6	3.5	2.1	.9	.1	(*)		
Reliance			(*)	(*)		(*)		
Hope			(*)	.1	.2	(*)		
Dixon	(*)		(*)	.3	(*)	(*)		
Haynes Bluestem	9.5	1.2	.6	.2	(*)	(*)		
Red Fife	4.6	1.6	.2	.1	(*)	(*)		
Stanley						(*)		
Mercury						(*)		
Varieties not reported in 1944 and 1949	.5	.7	.7	.5	.2			
Total reported	100.0	100.0	100.0	100.0	100.0	100.0	100.0	17,668,995
Varieties not reported								21,463
Total								17,690,458

1949 to become the leading variety of spring wheat. It constituted 31.4 percent of the acreage of this class. It was reported in 12 States, North Dakota, South Dakota, and Minnesota having the largest acreages. Its rapid increase was due largely to its resistance to stem rust, to high yield, and to good strength of straw. Its disadvantages are susceptibility to loose smut, shattering, and injury from spring frosts. Mida replaced Pilot, Rival, and Regent in many places because of its stronger straw and higher yield. The distribution of Mida wheat in 1949 is shown in figure 4.

THATCHER

Thatcher decreased from 5,524,631 acres in 1939 to 4,450,254 in 1944 but retained its first rank. In 1949, however, its acreage dropped to

3,370,823 and it became the second most widely grown variety of its class with 19.1 percent. It was reported in 14 States, North Dakota, Montana, Colorado, and South Dakota having the largest acreages. The decrease in recent years has been due to injury from leaf rust and to lower yields. In the United States, the acreage of Thatcher has decreased in Minnesota and the eastern part of North Dakota and South Dakota, but increased in Montana, Colorado, and Wyoming. In Canada during the last 5-year period, it continued to increase in Saskatchewan and Alberta. It has been estimated by the Searle Grain Co.[4] that 15,336,900 acres were grown in Canada in 1949, an increase of 26.3 percent from the 12,142,000 acres in 1944. This increase has been largely in Saskatchewan where more than 11 million acres were grown and where it occupied 71.3 percent of the acreage. For the United States and Canada combined this is a total of 18,708,000 acres, a gain of more than 2 million acres from 1944. The distribution of Thatcher wheat in the United States in 1949 is shown in figure 5.

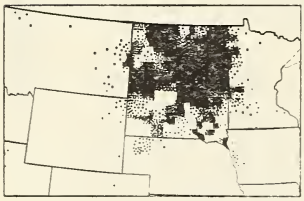

FIGURE 4.—Mida.
5,554,156 acres.

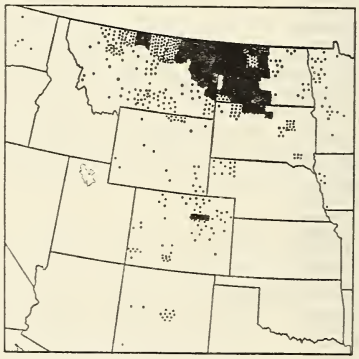

FIGURE 5.—Thatcher.
3,370,823 acres.

RIVAL

Rival ranked third in acreage in 1949, having decreased from 25.8 to 16.6 percent of the class, or more than 1 million acres from 1944. It was partly replaced by Mida in Minnesota and North Dakota. As Rival shatters easily it is grown more in the eastern section of the spring wheat region and where the crop is harvested with a binder, since it is not well adapted for combining. It was reported grown in eight States in 1949, with the largest acreages in South Dakota, North Dakota, and Minnesota (fig. 6).

CERES

Ceres decreased from 1,622,762 acres in 1944 to 1,184,625 in 1949, ranking fourth among the varieties of the class. Ceres has decreased steadily since 1934, when it ranked second only to Marquis. By 1939 the acreage had shifted westward, having been replaced in the eastern part of the spring wheat region by varieties more resistant to stem rust.

[4] SEARLE GRAIN CO., LTD. GRAIN MARKET FEATURES: THATCHER STILL LEADS. Searle Grain Co. Pam. 19 (24): [6 and 7], with supplement. 1949.

Montana and Colorado are the leading States among the 10 in which it was reported grown in 1949. The variety was seriously damaged by stem rust in Minnesota and North Dakota after 1934 and in South Dakota in 1944, and the acreage has since been largely confined to sections where stem rust does not occur. In the drier areas of Montana and Colorado the acreage of Ceres has increased since 1944. The distribution of Ceres wheat in 1949 is shown in figure 7.

RESCUE

Rescue is a solid-stemmed, sawfly-resistant variety developed at the Swift Current Station in Canada. It was increased and distributed by the Montana Agricultural Experiment Station in 1946. It was reported grown in five States in 1949, but principally in Montana and North Dakota where sawfly injury has been serious. It is not well adapted for growing in other sections. It ranked fifth in acreage in 1949, having increased to 916,147 acres, or 5.2 percent of the class. The distribution of this acreage is shown in figure 8.

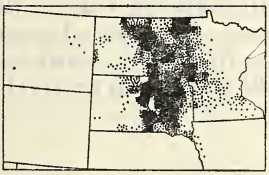

FIGURE 6.—Rival. 2,930,903 acres.

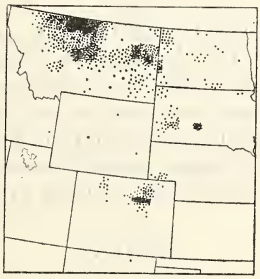

FIGURE 7.—Ceres. 1,184,625 acres.

FIGURE 8.—Rescue. 916,147 acres.

MARQUIS

Marquis dropped from fourth to sixth rank during the period 1944–49. From 1919 to 1934 Marquis was the leading variety. Its acreage was probably first surpassed by Ceres between 1935 and 1938, by Thatcher in 1939, and by Rival in 1944. Owing to the severe stem rust epidemics of 1935, 1937, and 1938, the acreage of both Ceres and Marquis decreased rapidly, with newer resistant varieties taking their places. In 1949 Marquis was still grown in 16 States (fig. 9), the largest acreages being in Montana, Washington, and Idaho. The estimated area of 882,382 acres was a decrease from 9.7 to 5.0 percent of the acreage of the class. There was a sharp reduction in the acreage of Marquis in Montana, from 1,226,726 acres in 1944 to 726,977 in 1949.

CADET

Cadet was developed by the United States Department of Agriculture in cooperation with eight States of the hard spring wheat region, and was distributed in 1946. It is an awnless, midseason variety of high quality and well adapted for direct combine harvesting. Its acreage increased steadily, and in 1949 it was reported grown in four States on 626,282 acres, as shown in figure 10.

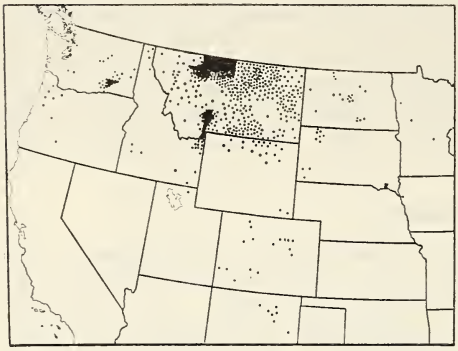

FIGURE 9.—Marquis.
882,382 acres.

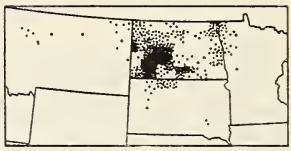

FIGURE 10.—Cadet.
626,282 acres.

PILOT

Pilot decreased from sixth to eighth rank, or from 1,217,009 acres in 1944 to 570,675 in 1949. The decrease was largely in the eastern section of the spring wheat region where it was replaced by new varieties more resistant to lodging. It was reported grown in 10 States in 1949, with South Dakota, North Dakota, and Montana leading. It is well adapted to the western part of the region, as it does not shatter and is suited for direct combining. The distribution of Pilot in 1949 is shown in figure 11.

REGENT

Regent decreased from 8.5 to 2.5 percent of the acreage of the class between 1944 and 1949. It was replaced largely by Mida. It is best adapted to the heavy soils of the Red River Valley. Regent was reported grown in seven States in 1949 on 441,392 acres, as shown in figure 12.

FIGURE 12.—Regent.
441,392 acres.

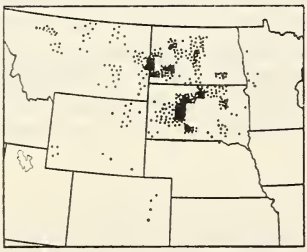

FIGURE 11.—Pilot.
570,675 acres.

FIGURE 13.—Newthatch.
282,076 acres.

NEWTHATCH

Newthatch, distributed in 1944, was developed at the Minnesota Agricultural Experiment Station from a backcross, Hope × Thatcher^{3}.[5] It was resistant to the races of leaf rust prevalent at the time of its distribution, but new races to which it is susceptible increased after its distribution. It is similar to Thatcher in appearance but is not so widely adapted. Newthatch was reported grown in four States in 1949 on 282,076 acres, as shown in figure 13.

OTHER VARIETIES OF HARD RED SPRING WHEAT

Ten varieties that have an estimated 200,000 acres or more have been discussed. Of the remaining 35 varieties listed in table 8, 21 were reported grown in 1949. Of these Redman, Rushmore, Spinkcota, and Comet were reported for the first time. Redman was developed in Canada and distributed in 1947, and Rushmore was developed in South Dakota and distributed in 1949. Both are stem-rust-resistant wheats of approved quality. Other stem-rust-resistant wheats that increased in acreage from 1944 to 1949 are Henry and Premier. Those that decreased are Vesta, Renown, Apex, and Marquillo. No stem-rust-susceptible variety showed an important gain in acreage, and 14 varieties reported grown in 1944 or earlier were not reported in 1949.

Of the 31 hard red spring wheats grown in 1949, only 12 are of approved quality and recommended for the northern spring wheat region of the United States. In the order of their 1949 acreage these varieties are Mida, Thatcher, Rival, Ceres, Marquis, Cadet, Pilot, Regent, Newthatch, Redman, Reward, and Rushmore.

Durum and Red Durum Varieties

Varieties of the durum and red durum classes of wheat are grown principally in eastern North Dakota and South Dakota and occupy a part of the same territory in which the hard red spring wheats are grown. The 1949 acreage was estimated at 3,579,196, as compared with 2,179,258 acres in 1944. The increase is due to improved durum varieties, market demands, and supported prices. The 1949 acreage is very similar to that of 1939 and is adequate to meet market needs.

Ten varieties were reported grown in 1949. The estimated acreage in 1949 and the percentage of the total durum and red durum area occupied by each variety at 5-year intervals since 1919 are given in table 9.

The distribution of all durum and red durum wheat is shown in figure 14.

Much of the durum and red durum acreage was reported as "durum" in previous surveys, since many growers considered this a varietal name. With the development of new, improved durum varieties, the acreage shown as "durum (varieties not reported)" decreased from 46.8 to 2.4 percent from 1944 to 1949.

STEWART

Stewart ranks first among the durum varieties, increasing from 12,389 acres in 1944, the year it was distributed, to 1,344,158 acres in 1949.

[5] Superscript, in italic, indicates number of times recurrent variety was used as a parent.

TABLE 9.—*Percentage of the total durum and red durum wheat acreage occupied by each variety of that class in the United States at 5-year intervals since 1919, and the estimated acreage for 1949*

[The asterisk (*) indicates the variety was reported as grown, but the estimate of acreage was less than 0.1 percent of the total acreage of the class]

Variety	Percentage of acreage							Acreage, 1949
	1919	1924	1929	1934	1939	1944	1949	
Stewart						0.6	37.6	1,344,158
Mindum		0.3	5.5	15.9	22.5	31.2	27.4	980,677
Carleton						.3	15.8	563,762
Pentad	1.1	8.2	17.3	11.1	18.3	9.1	8.1	288,762
Kubanka	1.2	11.6	12.5	24.6	12.8	8.3	7.8	280,438
Durum (varieties not reported) [1]	96.8	74.5	60.3	41.7	44.6	46.8	2.4	87,894
Peliss	.1	.1	.1	.9	.4	3.5	.4	13,478
Vernum							.4	13,392
Arnautka	.3	.6	.3	.7	.2	(*)	.1	4,046
Nodak		(*)	.6	.6	.1		(*)	240
Acme		1.6	1.3	3.8	.1	.1		
Kahla	.5	1.1	.5	.1	(*)	.1		
Varieties not reported in 1944 and 1949		2.0	1.6	.6	1.0			
Total reported	100.0	100.0	100.0	100.0	100.0	100.0	100.0	3,576,847
Varieties not reported								2,349
Total								3,579,196

[1] Includes durum and red durum classes.

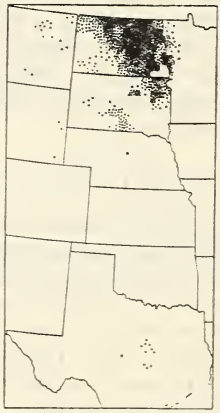

FIGURE 14.—Distribution of durum and red durum wheat in 1949. Estimated area 3,579,196 acres.

Stewart was developed by the United States Department of Agriculture and the North Dakota Agricultural Experiment Station from a backcross, Vernal (emmer) × Mindum[5].[6] The distribution of Stewart in 1949 is shown in figure 15. It was reported grown in five States—North Dakota, South Dakota, Minnesota, Montana, and Texas, in the order listed. It is a rust-resistant, high-yielding wheat best adapted to the higher, drier, and lighter soils of the durum-growing area. The quality of Stewart is considered equal or superior to that of Mindum for the manufacture of semolina, the coarse granular flour from which macaroni and other edible pastes are made.

[6] See footnote 5.

MINDUM

Mindum dropped from first to second rank among the durum varieties in 1949, although its acreage increased from 678,486 in 1944 to 980,677 in 1949. This 1949 acreage reported from four States is shown in figure 16. The steady increase in the acreage of Mindum since 1924 has been due to its high yield and good quality for macaroni. Millers prefer it to older varieties for the manufacture of semolina, and it has long been considered the standard for quality among durum wheats.

CARLETON

Carleton, distributed in 1944, increased from 6,113 acres that year to 563,762 in 1949. Carleton has the same origin as Stewart but differs in having stronger straw and is best adapted to the lower and heavier soils. It is not so high yielding as Stewart and Mindum but is of better quality. Carleton was reported grown in three States—North Dakota, Minnesota, and South Dakota (fig. 17).

FIGURE 15.—Stewart. 1,344,158 acres.

FIGURE 16.—Mindum. 980,677 acres.

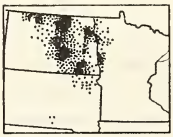

FIGURE 17.—Carleton. 563,762 acres.

PENTAD

Pentad (red durum) dropped from second to fourth rank among the durum varieties in 1949, although the acreage increased from 196,405 to 288,762 acres. This acreage is 8.1 percent of the durum acreage, which is less than in any survey since 1924. This decrease is due to the growing of the newer rust-resistant varieties of both hard red spring and durum. Pentad has long been grown from late seeding in the worst rust sections, but more recently as a smother crop for weed control. It yields well from late seeding and has an established market as a feed grain. It is not suited for the manufacture of semolina. The distribution of Pentad in 1949 is shown in figure 18. With the development of the newer rust-resistant durum varieties the acreage of Pentad should be further reduced, since it is not a recommended variety.

KUBANKA

Although Kubanka was for many years the most extensively grown durum variety, much of its acreage was reported merely as durum. The estimated acreage of Kubanka has decreased since 1934 to 7.8 percent of the class in 1949. The 1949 acreage was reported from three States as 280,438 acres (fig. 19). The decrease is due largely to the increase of Mindum and the newer rust-resistant durum wheats, Stewart and Carleton. Kubanka is not considered quite equal to these varieties in either yield or quality, but is still an approved variety.

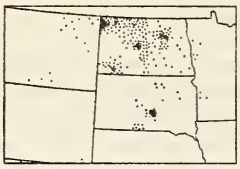

FIGURE 18.—Pentad.
288,762 acres.

FIGURE 19.—Kubanka.
280,438 acres.

OTHER DURUM VARIETIES

Of the durum varieties grown on less than 200,000 acres, Peliss (Algerian) decreased from 3.5 to 0.4 percent of the class. Vernum, a new variety distributed in 1947, was reported grown on 13,392 acres. A small acreage of Arnautka and Nodak was reported, but Acme and Kahla, grown on a small acreage in 1944 and previous years, were not reported grown in 1949. Of the 11 durum varieties shown in table 9, only Stewart, Mindum, Carleton, Kubanka, and Vernum are recommended for growing.

HARD RED WINTER VARIETIES

The hard red winter varieties are grown chiefly in the central and southern sections of the Great Plains region in Nebraska, Kansas, Colorado, Oklahoma, Texas, and New Mexico. Smaller acreages occur in Illinois, Missouri, Iowa, Wyoming, Montana, Washington, Idaho, Utah, and in some other States. The distribution of this class in 1949 is shown in figure 20. The acreage of hard red winter wheat increased from 32.0

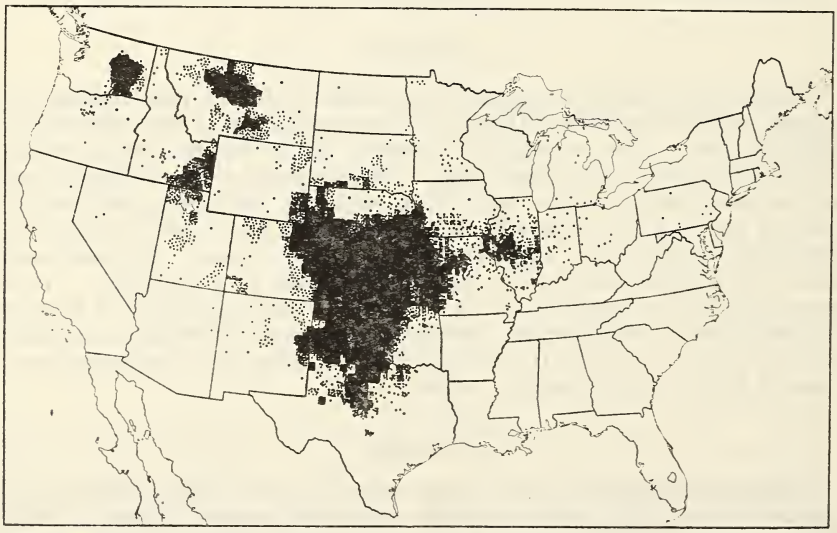

FIGURE 20.—Distribution of hard red winter wheat in 1949. Estimated area, 46,042,742 acres.

percent of all wheat in 1919 to 54.2 percent in 1949.

The number of commercial varieties has increased from 8 in 1919 to 44 in 1944 and 1949. Varieties reported for the first time in 1949 are

Wichita, Westar, Blue Jacket, Minter, Orienta, and Iohardi. Six varieties grown in previous years were not reported in 1949. The estimated acreage in 1949 and the percentage of the total hard red winter wheat acreage occupied by each of the commercial varieties by 5-year intervals since 1919 are shown in table 10.

Pawnee was grown on more than 11 million acres in 1949, while Comanche and Triumph were grown on more than 5 million acres each. Seventeen varieties were grown on 200,000 acres or more.

TABLE 10.—*Percentage of the total hard red winter wheat acreage occupied by each variety of that class in the United States at 5-year intervals since 1919, and the estimated acreage for 1949*

The asterisk (*) indicates the variety was reported as grown, but the estimate of acreage was less than 0.1 percent of the total acreage of that class]

Variety	Percentage of acreage							Acreage, 1949
	1919	1924	1929	1934	1939	1944	1949	
Pawnee						0.1	24.3	11,120,653
Comanche						.1	13.0	5,931,718
Triumph						.2	12.2	5,596,200
Turkey	99.4	70.5	59.5	55.9	42.0	27.1	7.2	3,311,617
Wichita							6.6	3,004,432
Tenmarq				.7	11.7	28.6	6.3	2,902,645
Westar							4.8	2,169,798
Early Blackhull			(*)	.3	1.1	5.5	4.6	2,106,295
Cheyenne				.2	2.5	4.6	4.3	1,940,510
Blackhull	(*)	7.5	22.7	25.1	27.0	15.0	3.9	1,786,492
Nebred						1.9	3.2	1,457,375
Red Chief						2.7	2.5	1,160,893
Yogo					.1	.5	1.2	562,186
Karmont		(*)	.3	.3	.4	.6	1.1	511,371
Chiefkan					1.6	5.7	.9	425,270
Wasatch						(*)	.9	393,788
Kanred	.5	21.2	13.0	10.9	5.1	3.3	.6	252,049
Cache						.1	.3	154,464
Blue Jacket							.3	124,015
Rio				(*)	.1	.1	.3	114,948
Iowin			(*)	(*)	.4	.4	.2	94,873
Newturk			.1	.1	.2	.2	.2	82,045
Ridit		(*)	.6	.6	.4	.2	.2	75,027
Brill					(*)	.1	.2	71,396
Iobred		(*)	.4	.4	1.6	.7	.1	68,427
Purkof			.8	1.1	1.2	.5	.1	62,835
Utah Kanred				.1	.2	.1	.1	42,962
Nebraska No. 60		.1	1.3	2.4	1.4	.6	.1	39,717
Sherman			(*)	(*)	(*)	(*)	.1	39,490
Minturki		.2	.3	.6	.5	.5	.1	32,591
Marmin						(*)	.1	21,356
Montana No. 36	(*)	.1	.1	.1	.1	.1	(*)	15,952
Redhull			(*)	.3	.5	.1	(*)	15,285
Minter							(*)	14,429
Mosida			.1	.1	.1	.1	(*)	14,335
Sibley 81				.1	.2	(*)	(*)	7,000
Relief				(*)	.3	.1	(*)	5,056
Ioturk			(*)	(*)	.1	(*)	(*)	4,762
Reliant						(*)	(*)	2,430
Orienta							(*)	810
Wisconsin Pedigree No. 2	(*)	(*)	(*)	(*)	(*)	(*)	(*)	615
Michikof		.3	.5	.4	.3	.1	(*)	580
Iohardi							(*)	449
Chequamegon						(*)	(*)	73
Oro			(*)	(*)	.2	.1		
Ashkof			(*)	(*)	(*)	(*)		
Ilred		.1	.1	(*)	(*)	(*)		
Ukrainka				(*)	(*)	(*)		
Alton	(*)	(*)	.1	(*)	.5	(*)		
Kanhull						(*)		
Varieties not reported in 1944 and 1949	.1	(*)	.1	.3	.2			
Total reported	100.0	100.0	100.0	100.0	100.0	100.0	100.0	45,739,214
Varieties not reported								303,528
Total								46,042,742

PAWNEE

Pawnee increased from 11,200 acres in 1944 to 11,120,653 in 1949 to become the most widely grown variety in the United States. Pawnee was developed in cooperative experiments of the Kansas and Nebraska Agricultural Experiment Stations and the Division of Cereal Crops and Diseases of the United States Department of Agriculture, from a cross between Kawvale and Tenmarq. It was first distributed in Nebraska in the fall of 1942 and in Kansas in 1943. The superior characteristics of Pawnee are short, stiff straw, high yield, good test weight, and resistance to loose smut. Its milling quality is good, and it is satisfactory for bread making. Pawnee was reported grown in 21 States, with largest acreages in Kansas, Nebraska, and Oklahoma, as shown in figure 21.

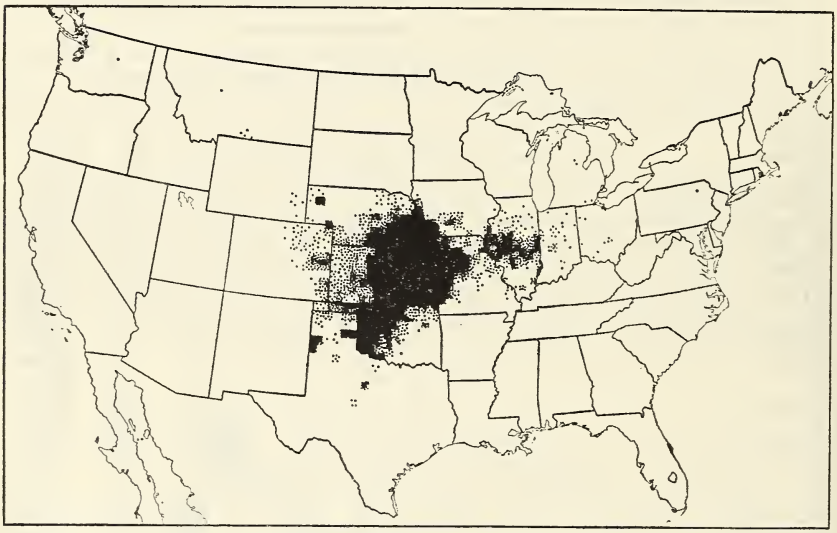

FIGURE 21.—Pawnee. 11,120,653 acres.

COMANCHE

Comanche ranks second in the hard red winter class, increasing from 21,522 acres in 1944 to 5,931,718 in 1949. It was developed by the Kansas Agricultural Experiment Station in cooperative experiments with the Division of Cereal Crops and Diseases from an Oro × Tenmarq cross, and was distributed in the fall of 1942 in Kansas, Oklahoma, and Texas. The superior characteristics of Comanche are earliness, stiff straw, high yield, good test weight, and excellent milling and baking qualities. Comanche was reported in nine States in 1949, as shown in figure 22.

TRIUMPH

The acreage of Triumph increased from 72,459 acres in 1944 to 5,596,200 in 1949. Triumph was developed by Joseph Danne of El Reno, Okla., and distributed by him in 1940 as Danne's Early Triumph. It is a very early, high-yielding wheat of satisfactory quality for family flour. Triumph was reported grown in 10 States in 1949, as shown in figure 23.

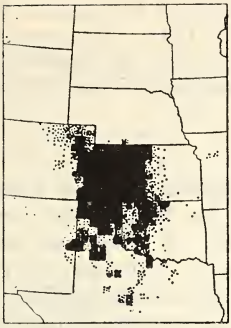

FIGURE 22.—Comanche. 5,931,718 acres.

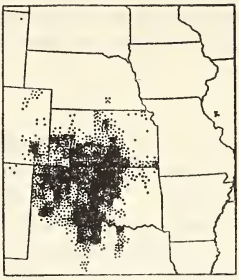

FIGURE 23.—Triumph. 5,596,200 acres.

TURKEY

Turkey dropped from 8,295,881 acres in 1944 to 3,311,617 in 1949. As in previous surveys, the acreage reported as Kharkof and other synonyms is included with Turkey. Turkey was the leading variety of wheat in the number of acres grown prior to 1944, when it was surpassed by Tenmarq. In 1949 it was surpassed by Pawnee, Comanche, and Triumph. In the 1919 survey Turkey occupied 99.4 percent of the hard red winter wheat acreage, but since that time its area has gradually decreased until in 1949 it was estimated as being grown on only 7.2 percent of the class acreage. Turkey is still grown in all but the Eastern and Southern States. In 1949 it was reported grown in 29 States, as shown in figure 24.

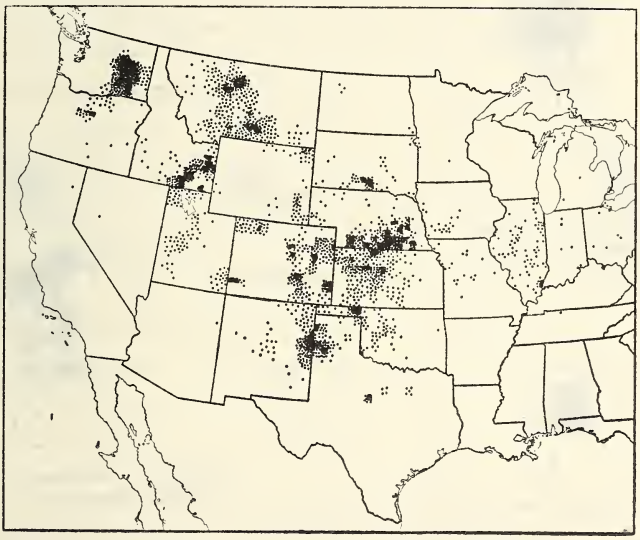

FIGURE 24.—Turkey. 3,311,617 acres.

WICHITA

Wichita was developed by the Kansas Agricultural Experiment Station and the Division of Cereal Crops and Diseases from a cross between

Early Blackhull and Tenmarq. Seed was increased in Kansas, Oklahoma, and Texas, and was distributed in the fall of 1944. Between 1945 and 1949 it increased to more than 3 million acres (fig. 25) and to fifth rank among the varieties of the class. It is a very early wheat of heavy test weight.

TENMARQ

Tenmarq, developed in cooperative experiments at the Kansas Agricultural Experiment Station, was released in 1932. The acreage increased rapidly. It was the leading variety of wheat in the United States in 1944 when 8,744,053 acres were grown. Tenmarq was estimated grown on 2,902,645 acres in 1949 (fig. 26), of which 1,385,635 were in Kansas, 584,490 in Texas, 507,988 in Colorado, and 268,375 in Oklahoma. While Tenmarq has excellent grain quality, it does not perform as well in the field as Pawnee, Comanche, Triumph, and Wichita, which have increased rapidly in recent years.

WESTAR

Westar was developed in cooperative experiments in Texas from a cross between Kanred-Hard Federation (sel. 25007) and Tenmarq and distributed in 1944. It has excellent grain quality and resistance to some races of leaf rust, and is recommended for the Plains and Panhandle areas of Texas. It was estimated grown on 2,169,798 acres in 1949 (fig. 27), of which 2,004,170 were in Texas.

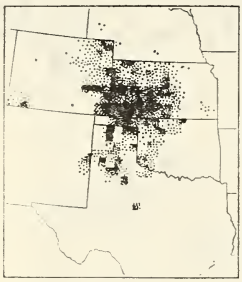

FIGURE 25.—Wichita. 3,004,432 acres.

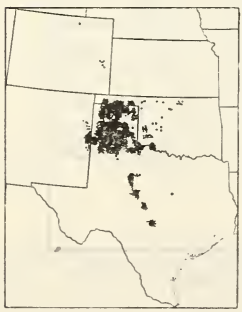

FIGURE 27.—Westar. 2,169,798 acres.

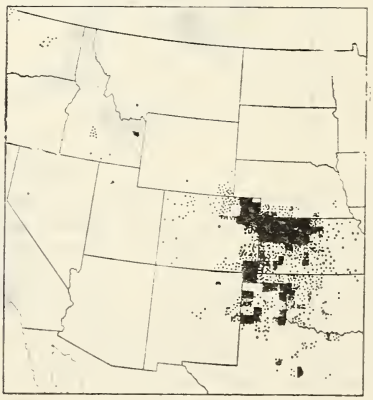

FIGURE 26.—Tenmarq. 2,902,645 acres.

EARLY BLACKHULL

Early Blackhull is one of the earliest and most winter-tender varieties of hard red wheat now being grown commercially. In the 1949 survey it was estimated to occupy 4.6 percent of the class total, or 2,106,295 acres. This is a decrease in percentage but an increase in acreage from 1944. In that year it was reported from only three States, while in 1949 it was grown in seven States, as shown in figure 28.

CHEYENNE

Cheyenne, reported for the first time in the 1934 survey, has gradually increased until in 1949 it occupied 1,940,510 acres. In percentage of the class, however, it dropped from 4.6 in 1944 to 4.3 percent in 1949. In 1949 it was reported as being grown in eight States (fig. 29), with more than half the acreage in Nebraska, where it was developed. It is most popular in southwestern Nebraska and adjoining counties of Colorado and Kansas, because of its stiff straw, erect heads, and suitability for direct combine harvesting.

BLACKHULL

Blackhull dropped from third to tenth rank among the varieties of hard red winter wheat between 1944 and 1949. The distribution of Blackhull, including Superhard, is shown in figure 30. The variety, distributed by Earl G. Clark, a farmer of Sedgwick, Kans., in 1917, gradually increased until it occupied 27.0 percent of the class acreage in 1939. Since then it has decreased rapidly. In 1949 Blackhull was reported grown in eight States, with the largest acreage in Kansas, Texas, and Colorado. The variety was popular because of its earliness, heavy test weight, and good yield.

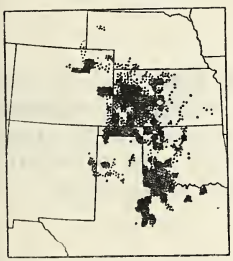

FIGURE 28.—Early Blackhull. 2,106,295 acres.

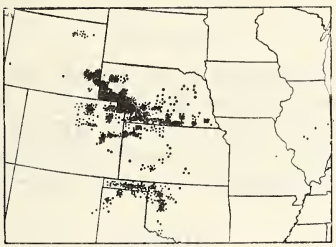

FIGURE 29.—Cheyenne. 1,940,510 acres.

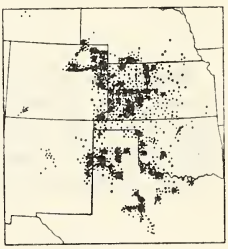

FIGURE 30.—Blackhull. 1,786,492 acres.

NEBRED

Nebred, developed at the Nebraska station, was distributed in 1938. It was estimated to be grown on 580,954 acres in 1944 and increased to 1,457,375 in 1949 (fig. 31). It was reported from nine States, with most of the acreage in Nebraska. The variety is popular in western Nebraska and in South Dakota because of its hardiness, good yields, resistance to stinking smut, and suitability for combine harvesting.

RED CHIEF

The acreage of Red Chief increased from 817,562 acres in 1944 to 1,160,893 in 1949, although the percentage of the class acreage decreased from 2.7 to 2.5 percent. In 1949 Red Chief was reported grown in nine States, with the largest acreages in Kansas, Oklahoma, and Texas. Red Chief has replaced some of the acreage formerly occupied by Chiefkan, which it resembles. The distribution of Red Chief in 1949 is shown in figure 32. This variety has a high test weight and good kernel color and yields fairly well. Unfortunately, its milling and baking characteristics are not acceptable to the grain trade.

YOGO

The acreage of Yogo increased from 150,924 in 1944 to 562,186 in 1949, or from 0.5 to 1.2 percent of the class. Yogo was reported grown in six States in 1949 (fig. 33), with most of the acreage in Montana, where it was developed. Yogo has outstanding cold resistance and produces good yields. It also has resistance to some races of bunt.

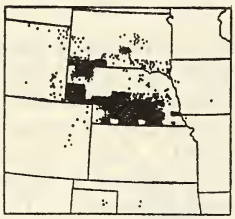

FIGURE 31.—Nebred. 1,457,375 acres.

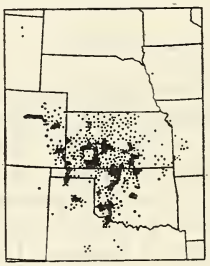

FIGURE 32.—Red Chief. 1,160,893 acres.

FIGURE 33.—Yogo. 562,186 acres.

KARMONT

Karmont was also developed in Montana, and in 1944 was reported grown only in its home State on 190,394 acres. In 1949 it was reported grown in four States on 511,371 acres, 507,534 of them in Montana (fig. 34). In Montana it is the second most important hard red winter wheat, with its acreage largely in the north-central part of the State.

CHIEFKAN

The acreage of Chiefkan decreased from 1,752,751 in 1944 to 425,270 in 1949, or from 5.7 to 0.9 percent of the class. This reduction is due to the availability of improved varieties and to its inferior baking properties. The distribution of Chiefkan is shown in figure 35. It was still grown in nine States, with the largest acreages in Kansas, Oklahoma, and Texas. Chiefkan is noted for its high test weight per bushel.

WASATCH

Wasatch, developed in Utah and distributed in 1942, increased from 2,992 acres in 1944 to 393,788 in 1949. Bred for resistance to dwarf

FIGURE 34.—Karmont.
511,371 acres.

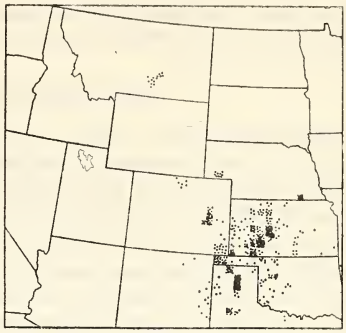

FIGURE 35.—Chiefkan.
425,270 acres.

bunt, it was distributed for growing in the dwarf-bunt-infested areas of Utah, western Montana, southern Idaho, and central Washington. In 1949 the variety was reported grown in six States (fig. 36), with Idaho, Utah, and Montana leading.

KANRED

Kanred, distributed by the Kansas station in 1917, was one of the first improved varieties to be released in the hard red winter wheat area. It reached its peak in 1924 when it occupied 21.2 percent of the class area and ranked third among the wheats of the United States. Since then its acreage has gradually decreased, and in 1949 it occupied only 252,049 acres, as shown in figure 37. It was still grown in nine States, the largest acreages being in Texas and Colorado.

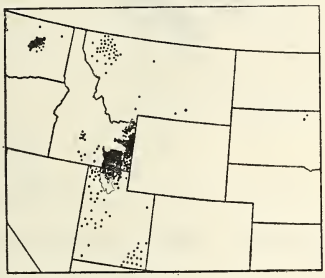

FIGURE 36.—Wasatch.
393,788 acres.

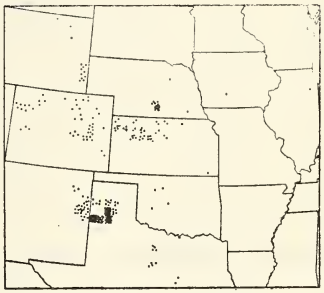

FIGURE 37.—Kanred.
252,049 acres.

OTHER VARIETIES OF HARD RED WINTER WHEAT

Twenty-seven other varieties of hard red winter wheat are shown in table 10 with 1949 acreages of less than 200,000 acres. Cache, a wheat resistant to dwarf bunt, was reported on 154,464 acres in Utah, Idaho, Montana, and Oregon. Blue Jacket, developed by Earl G. Clark of Sedgwick, Kans., and distributed in 1947, was reported grown on 124,015 acres in four States but mostly in Kansas. Other new wheats reported for the first time are Minter in Minnesota, Orienta in Oklahoma, and Iohardi in Iowa. Of the older varieties, the acreages of Rio, Newturk,

Ridit, Brill, Sherman, and Marmin increased slightly, while the others decreased. Six varieties reported in 1944 were not reported grown in 1949.

Soft Red Winter Varieties

The soft red winter wheat varieties are grown principally in the semi-humid to humid areas east and south of the hard red winter wheat belt, in the eastern half of the United States, and on a small acreage in the Pacific Northwest. There is, however, no sharp line of demarcation of the areas where the two classes are grown. Where they overlap there is considerable fluctuation from year to year in the relative acreages of these classes, depending largely on comparative winter survival yields and prices obtained. Soft red winter ranks third among the various market classes of wheat and in 1949 was estimated to make up 13.0 percent of the total wheat acreage of the United States. The distribution in 1949 is shown in figure 38.

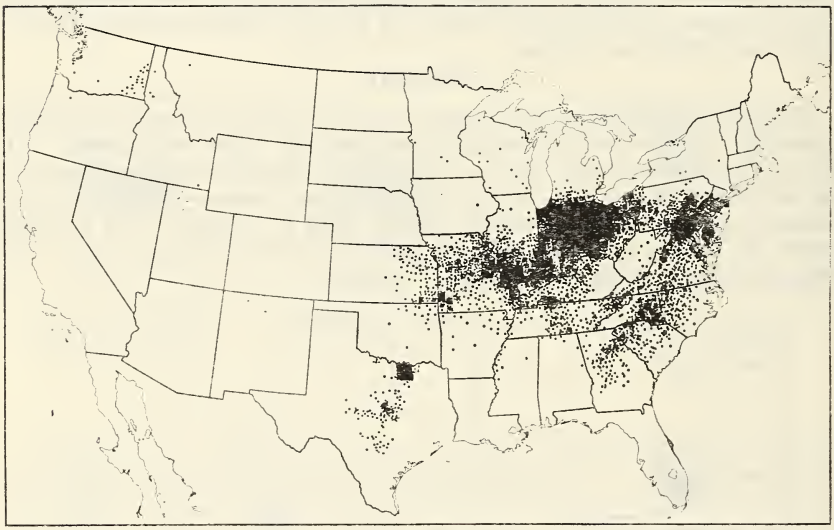

Figure 38.—Distribution of soft red winter wheat in 1949. Estimated area, 11,002,599 acres.

Estimates of the 1949 acreages and the percentages of the total soft red winter wheat acreage occupied by each variety by 5-year intervals since 1919 are shown in table 11. In 1949, 67 varieties were reported grown, and of this number, 12 were reported for the first time. These new varieties in order of acreage are Vigo, Royal, Blackhawk, Vahart, Butler, Newcaster, Chancellor, Seabreeze, Moking, Atlas 50, Atlas 66, and Nudel. Fifteen varieties reported as being grown in 1944 were not reported in 1949. The number of varieties grown commercially is much larger than for any other class.

TABLE 11.—*Percentage of the total soft red winter wheat acreage occupied by each variety of that class in the United States at 5-year intervals since 1919, and the estimated acreage for 1949*

[The asterisk (*) indicates the variety was reported as grown, but the estimate of acreage was less than 0.1 percent of the total acreage of that class]

Variety	Percentage of acreage							Acreage, 1949
	1919	1924	1929	1934	1939	1944	1949	
Thorne					(*)	13.7	33.2	3,447,661
Clarkan					1.2	7.8	9.0	939,098
Fairfield						.3	6.7	691,488
Redhart			(*)	1.0	2.3	5.9	5.8	604,624
Vigo							4.4	452,427
Fultz	23.5	17.1	14.5	15.8	12.2	10.4	3.6	377,243
Fulcaster	12.6	17.3	14.0	11.8	10.3	7.0	3.4	354,137
Trumbull	(*)	5.7	9.0	9.6	10.8	5.1	2.9	300,954
Kawvale				.4	10.2	6.9	2.9	300,594
Mediterranean	13.6	5.7	5.4	4.4	3.2	2.9	2.4	252,145
Austin						.1	2.1	218,211
Fulhio		.8	2.5	4.5	7.3	3.7	1.7	178,212
Sanford						.3	1.6	164,871
Rudy	2.0	2.4	1.9	1.8	1.9	1.8	1.6	163,777
Forward		(*)	1.6	2.2	2.7	2.1	1.4	140,303
Red May	5.7	3.8	8.0	8.3	5.0	3.3	1.3	139,723
Leap	2.6	4.9	6.7	6.0	5.6	5.7	1.2	127,489
Nigger	1.4	1.9	1.3	1.3	1.0	.7	1.1	116,191
Goens	.6	1.0	.2	.6	.8	.5	1.1	110,470
Nittany		2.5	4.0	3.5	4.2	4.0	1.1	110,369
Hardired						.4	1.1	109,903
Purplestraw	1.3	1.1	1.5	2.6	2.5	2.6	1.0	100,692
Currell	3.2	2.5	4.3	4.1	3.7	2.8	.9	87,891
Royal							.8	85,384
V.P.I. 131			.8	.9	.8	.9	.8	81,402
Carala						.1	.7	71,894
Blackhawk							.7	71,506
Flint	.5	1.0	.7	1.5	1.1	1.5	.6	64,518
Vahart							.6	60,991
Butler							.5	52,160
Leapland					(*)	.4	.5	48,949
Prairie						(*)	.4	44,945
Triplet		1.0	1.7	1.1	.8	.4	.4	44,248
Poole	12.0	10.0	6.0	5.7	3.1	1.8	.4	44,122
Newcaster							.4	42,814
Wabash					(*)	.4	.2	22,875
Jones Fife	2.3	2.0	1.7	1.0	.5	.2	.2	20,064
Nured						.2	.2	19,257
Red Rock	1.1	3.3	2.6	1.9	1.3	1.4	.2	14,266
Rice	.2	.5	.1	.1	.3	.1	.1	11,114
Red Wave	5.5	4.2	2.6	2.6	1.4	1.0	.1	10,290
Baldrock				.2	.9	.7	.1	10,149
Chancellor							.1	9,941
Red Russian	.8	.5	.6	.3	.1	.2	.1	9,139
Harvest Queen	4.9	3.9	3.6	3.2	1.5	.2	.1	8,665
Mammoth Red	(*)	.1	.5	.4	.2	.2	.1	8,323
Seabreeze							.1	6,750
Sanett						(*)	.1	5,513
Prosperity	.2	(*)	.1	.1	.1	(*)	(*)	3,038
Moking							(*)	2,200
Denton			.2	.4	.3	.2	(*)	2,100
Fultzo-Mediterranean	1.5	.8	.4	.3	.1	.3	(*)	2,010
Atlas 50							(*)	1,841
Lofthouse	(*)	(*)	.1	(*)	(*)	.1	(*)	1,705
Early Premium						.4	.3	(*)	1,675
Atlas 66							(*)	1,535
Gipsy	.6	.8	.3	.4	.1	(*)	(*)	1,255
Purdue No. 1				(*)	.5	.3	(*)	1,148
Valprize				(*)	.1	(*)	(*)	918
Nudel							(*)	692
Gasta				(*)	(*)	(*)	(*)	689
Nabob			(*)	(*)	.1	(*)	(*)	681
Valley			(*)	.1			(*)	464
Russian Red	.8	.5	.1	.3	(*)	.4	(*)	335
Ashland		(*)	.1	(*)	(*)	(*)	(*)	128
Red Indian		.3			.1	(*)	(*)	91
Gladden	(*)	1.0	.4	.3	.2	.1	(*)	23
Russian		.2	.2	.1	.2	.2		
China	.3	.6	.1	.1	.1	.1		
Illinois No. 2				(*)	.1	.1		
Hybrid 123	.1	.5	.3	(*)	(*)	.1		
Grandprize	.2	.1	(*)	(*)	.1	(*)		

TABLE 11.—*Percentage of the total soft red winter wheat acreage occupied by each variety of that class in the United States at 5-year intervals since 1919, and the estimated acreage for 1949*—Continued

Variety	Percentage of acreage							Acreage, 1949
	1919	1924	1929	1934	1939	1944	1949	
V.P.I. 112			.3	.1	.1	(*)		
Berkeley Rock			.2	.2	.1	(*)		
Red Clawson	.4	.2	.1	.1	.1	(*)		
Mealy	.3	.1	.1	(*)	(*)	(*)		
Oakley	(*)	(*)	(*)		(*)	(*)		
Squareheads Master				(*)	(*)	(*)		
Wheedling	.1	(*)	(*)	(*)		(*)		
Diehl-Mediterranean	.6	.6	.4	.4	.1	(*)		
Portage	(*)	.5	.1	.2	.1	(*)		
Odessa	.3	.2	.1	(*)	(*)	(*)		
Varieties not reported in 1944 and 1949	.8	.4	.6	.1	.1	.1		
Total reported	100.0	100.0	100.0	100.0	100.0	100.0	100.0	10,380,280
Varieties not reported								622,319
Total								11,002,599

THORNE

Thorne was developed at the Ohio Agricultural Experiment Station and distributed in 1937. In 1939, only 3,239 acres were reported, while it was estimated to occupy 3,447,661 acres, or 33.2 percent, of the soft red winter wheat acreage in 1949. It ranks fifth in acreage among all wheat varieties. Thorne was reported from 16 States, the largest acreage being in Ohio. Other States reporting large acreages were Pennsylvania, Indiana, Illinois, Maryland, Kentucky, Virginia, and New Jersey. It is the leading variety in Ohio, Pennsylvania, New Jersey, Delaware, Maryland, West Virginia, Kentucky, and Virginia.

The increase in acreage of Thorne has been very rapid since 1939. It seems to have replaced much of the former acreage of Trumbull, Nittany, Fulcaster, Leap, and Fultz. The distribution of Thorne wheat in 1949 is shown in figure 39.

CLARKAN

Clarkan, developed by the farmer wheat breeder, Earl G. Clark of Sedgwick, Kans., was distributed in 1934. It was estimated grown on 939,098 acres (fig. 40), or 9 percent of the acreage in soft red winter wheat, in 1949. It was the leading variety in Missouri, where 759,760 acres were estimated grown. Other important States were Illinois, with 55,395 acres; Kentucky, with 28,894; and Kansas, with 10,639. Small acreages were grown in 10 other States. Clarkan is largely confined to the western part of the soft wheat belt.

FAIRFIELD

Fairfield, developed and distributed by the Indiana Agricultural Experiment Station in 1942, was grown on 691,488 acres in seven States in 1949 (fig. 41), of which 517,924 were in Indiana, 74,070 in Illinois, and 69,057 in Ohio. Smaller acreages were reported from Michigan, Missouri, Pennsylvania, and West Virginia.

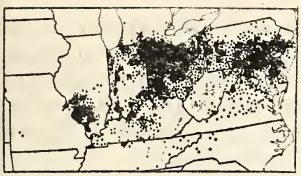

FIGURE 39.—Thorne.
3,447,661 acres.

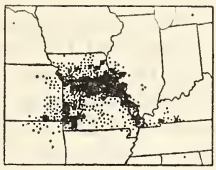

FIGURE 40.—Clarkan.
939,098 acres.

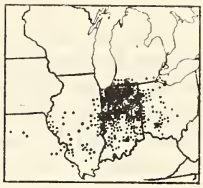

FIGURE 41.—Fairfield.
691,488 acres.

REDHART

Redhart, first distributed by the Coker Pedigreed Seed Co. in 1921, is largely produced in the southeastern United States. It was estimated grown in 12 States on 604,624 acres in 1949 (fig. 42), of which 278,366 were in North Carolina, 122,972 in South Carolina, 82,270 in Virginia, and 56,308 in Kentucky. Small acreages were grown in Georgia, Tennessee, Maryland, Arkansas, West Virginia, Mississippi, Alabama, and Delaware.

VIGO

Vigo is a new variety developed and distributed by the Indiana Agricultural Experiment Station and the Division of Cereal Crops and Diseases in the fall of 1946. In 1949 it was grown in eight States on an estimated 452,427 acres (fig. 43), of which 364,585 were in Indiana, 37,391 in Ohio, and 27,230 in Illinois. Small acreages were grown in Missouri, Kentucky, Pennsylvania, Michigan, and Tennessee.

FULTZ

Fultz, an old variety, was the leading variety of soft red winter wheat for many years prior to 1940. In 1919 it occupied 23.5 percent of the soft red winter acreage, but by 1949 the percentage had decreased to 3.6. The acreage of Fultz in 1949 was estimated at 377,243 acres (fig. 44),

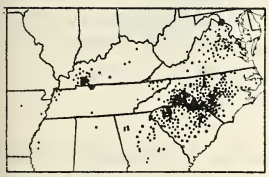

FIGURE 42.—Redhart.
604,624 acres.

FIGURE 43.—Vigo.
452,427 acres.

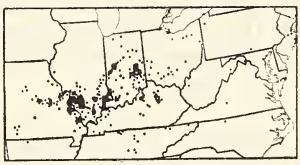

FIGURE 44.—Fultz.
377,243 acres.

of which 136,456 were in Illinois, 102,784 in Indiana, 55,255 in Missouri, and 37,546 in Kentucky. Small acreages were grown in Ohio, Tennessee, New Jersey, West Virginia, Pennsylvania, Virginia, Arkansas, Maryland, North Carolina, Michigan, and Alabama.

FULCASTER

Fulcaster, also an old variety, was for many years widely grown in the eastern United States. It occupied 17.3 percent of the soft wheat acreage in 1924, but the percentage by 1949 was only 3.4. In 1949 it was still grown in 19 States on 354,137 acres (fig. 45), of which 104,120 were in Illinois, 78,647 in Tennessee, 40,225 in Missouri, and 28,587 in North Carolina. The remainder was reported from 15 other States.

TRUMBULL

Trumbull, a selection from Fultz, was distributed in Ohio in 1916. It was the leading variety in that State for many years, but it has now been largely replaced by Thorne. It decreased from 10.8 percent of the soft red winter acreage in 1939 to 2.9 in 1949, when it was grown on 300,954 acres (fig. 46). Of this area, 244,313 acres were in Ohio and 47,032 in Indiana. Small acreages were grown in seven other States.

KAWVALE

Kawvale, a variety with a kernel appearance like a soft wheat but with texture more nearly resembling hard wheat, was released by the Kansas Agricultural Experiment Station in 1932. It was grown on 10.2 percent of the soft red winter acreage in 1939, but it had decreased to 2.9 in 1949. Of the estimated 300,594 acres grown in 1949 (fig. 47), 112,696 acres were in Kansas, 105,503 in Illinois, and 74,025 in Missouri. Small acreages were reported from Indiana, Iowa, Pennsylvania, Ohio, Michigan, and New York.

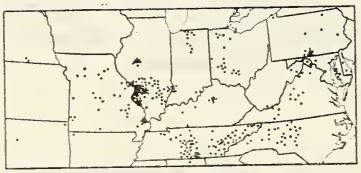

FIGURE 45.—Fulcaster. 354,137 acres.

FIGURE 46.—Trumbull. 300,954 acres.

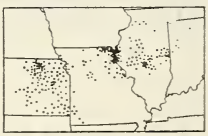

FIGURE 47.—Kawvale. 300,594 acres.

MEDITERRANEAN

Mediterranean decreased from 13.6 percent of the soft red winter acreage in 1919 to 2.4 in 1949, when it was grown on 252,145 acres (fig. 48). Of this, 204,700 acres were in eastern Texas. The rest was reported in 12 additional States, the largest acreage, 11,110, being in Missouri.

AUSTIN

Austin, a stem-rust-resistant variety was distributed in Texas in 1942. It increased rapidly, but it was susceptible to races of leaf rust that were seldom collected prior to 1948. When Austin was grown on a large acreage these races increased rapidly. In their presence Austin showed as much leaf rust as the old varieties. Because of this and the fact that it is not very winter hardy, the acreage of Austin is rapidly decreasing. In 1949 it was estimated grown on 218,211 acres (fig. 49), or 2.1 percent of the soft red winter acreage, of which 209,000 acres were in Texas and 9,211 in Oklahoma.

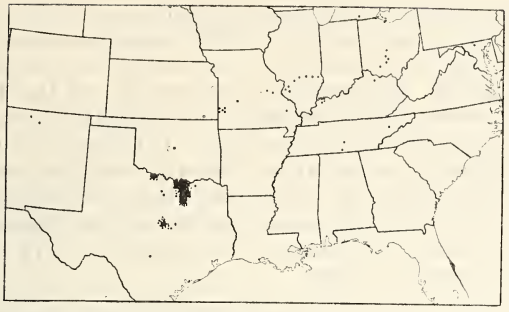

FIGURE 48.—Mediterranean. 252,145 acres.

FIGURE 49.—Austin. 218,211 acres.

OTHER VARIETIES OF SOFT RED WINTER WHEAT

The 11 soft red winter varieties discussed individually, and for which distribution maps are shown, were reported as being grown on more than 200,000 acres each in 1949. Of the remaining 56 varieties 11 were estimated grown on more than, and 45 on less than, 100,000 acres. The total acreages for these varieties are given in table 11 and the acreage in each State is given in table 1. Most of these 56 are old varieties whose acreages have decreased as a result of increased acreages of improved varieties. As previously indicated, 12 varieties, including Vigo, Royal, and Blackhawk, are new, and were reported for the first time in the 1949 survey. The acreage of most of these new, improved varieties is expected to increase.

WHITE VARIETIES

The estimated area sown to varieties of white wheat in 1949 was 6,616,005 acres, or 7.8 percent of the total wheat acreage. The distribution of this acreage is shown in figure 50. It is confined largely to the Western States and to Michigan and New York in the east. In the east the acreage is entirely of winter varieties with soft grain. Both winter and spring varieties, as well as soft and hard and common and club varieties, are grown in the west.

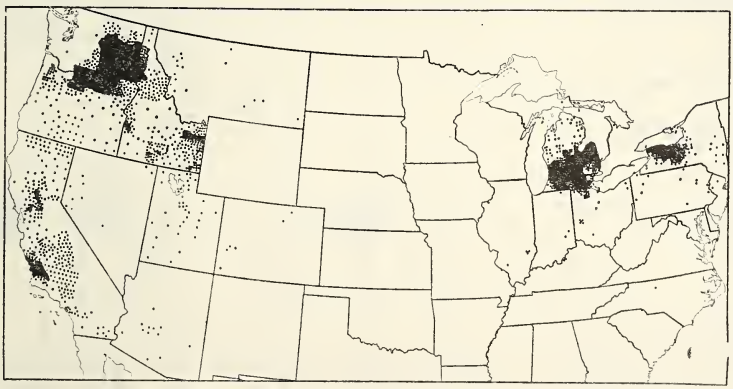

FIGURE 50.—Distribution of white wheat in 1949. Estimated area, 6,616,005 acres.

The percentage that each variety is of the class total in each survey since 1919 and the total acreage of each variety in 1949 are given in table 12. The numbers of white varieties reported in the surveys at 5-year intervals from 1919 to 1949 are 47, 46, 52, 62, 65, 54, and 48. Of the 48 varieties grown in 1949, 12 were grown on more than 200,000 acres. Five are reported for the first time in the 1949 survey. It is known that a considerable acreage of Golden is reported as Goldcoin and that the acreage divided between such varieties as Baart and Baart 38 may be somewhat confused, but the totals for each pair of similar varieties should be correct. There were 13 varieties of white wheat grown in 1944 or earlier that were not reported grown in 1949.

TABLE 12.—*Percentage of the total white wheat acreage occupied by each variety of that class in the United States at 5-year intervals since 1919, and the estimated acreage for 1949*

[The asterisk (*) indicates the variety was reported as grown, but the estimate of acreage was less than 0.1 percent of the total acreage of the class]

Variety	Percentage of acreage							Acreage, 1949
	1919	1924	1929	1934	1939	1944	1949	
Yorkwin					3.0	9.0	17.2	1,107,530
Elgin							9.3	596,293
Federation		1.1	16.8	17.4	14.4	13.8	8.8	564,841
Baart	10.0	16.9	17.1	19.8	21.6	16.5	7.8	504,268
Rex					9.0	8.9	6.6	427,413
Goldcoin	19.1	23.4	19.9	10.9	6.5	8.6	5.6	359,678
Cornell 595						(*)	5.2	335,894
Hymar					3.1	4.1	4.2	269,880
White Federation 38						4.0	3.8	241,675
Golden				(*)	.9	3.3	3.6	234,199
Alicel					.1	1.2	3.6	233,803
Lemhi					(*)	2.2	3.2	202,256
Ramona 44							3.0	189,967
Orfed						(*)	2.9	182,652
Idaed					(*)	.9	2.6	166,418
Baart 38						3.3	2.4	154,060
Requa					(*)	.1	1.7	112,060
Hybrid 128	5.8	14.5	8.0	3.6	1.1	2.1	1.2	77,899
Dawson	2.5	2.2	.9	8.9	9.2	9.2	.9	58,390
Wilhelmina			.5	.9	.9	1.1	.8	53,136
Onas			.4	.7	.9	1.0	.8	49,661
Galgalos	.7	.5	.3	.3	.5	.4	.6	40,377
Big Club 43							.6	40,048
Hard Federation		.4	1.4	.2	.2	.2	.5	34,025
Marfed							.5	31,998
Dicklow	3.3	4.0	5.7	4.4	3.4	1.7	.5	29,229
Pacific Bluestem 37					(*)	.3	.4	26,773
Oregon Zimmerman			.1	.4	.4	.2	.3	21,309
Jenkin	1.3	3.9	2.1	1.2	.4	.3	.3	16,887
Poso 44							.2	14,984
Bunyip	(*)	1.0	2.6	1.8	2.3	1.0	.2	13,541
Pacific Bluestem	27.4	13.0	8.1	4.2	3.1	1.0	.2	11,007
Albit			1.7	9.8	3.1	.5	.1	5,943
Florence		.4	2.9	3.0	3.5	.9	.1	5,797
White Federation		(*)	.9	2.6	5.5	1.0	.1	5,417
White Winter	1.1	1.0	.6	.4	.6	.6	.1	3,829
Greeson	.1	.4	.2	.4	.3	.3	.1	2,452
Sonora	5.3	3.1	2.0	1.3	.6	.3	(*)	2,285
Pilcraw	(*)		.3	.6	.6	.3	(*)	2,138
Prohibition	.5	.5	.1	.2			(*)	1,583
Defiance	3.9	1.3	.9	.9	.3	.1	(*)	1,488
Major				(*)	.1	.1	(*)	1,474
Sevier	(*)	.1	.1	(*)	(*)	(*)	(*)	1,002
Rink	.3	.7	.7	.2	.1	(*)	(*)	959
Utac			(*)	(*)	.1	.1	(*)	501
Silvercoin	(*)	(*)	.1	(*)		.1	(*)	286
Hybrid 63	.7	.4		.1	.1	(*)	(*)	242
Bluechaff	(*)	.1	(*)	(*)	(*)		(*)	64
Big Club	.4	.7	.1	.9	.8	.5		
Ramona				(*)	.2	.3		
Honor		.2	.4	1.7	.9	.2		
Poso				(*)	.6	.1		
Club (varieties not reported)	7.7	5.7	2.8	.5	.4	.1		

TABLE 12.—*Percentage of the total white wheat acreage occupied by each variety of that class in the United States at 5-year intervals since 1919, and the estimated acreage for 1949*—Continued

Variety	Percentage of acreage							Acreage, 1949
	1919	1924	1929	1934	1939	1944	1949	
Little Club	2.1	.8	.4	.7	-------	.1	-------	----------
Redchaff	.8	.1	.2	.1	.1	(*)	-------	----------
Kofod	.2	.2	.1	(*)	-------	(*)	-------	----------
Escondido	-------	-------	.1	.4	.4	(*)	-------	----------
Touse	.5	.3	.1	.1	(*)	(*)	-------	----------
Athena	-------	-------	-------	-------	(*)	(*)	-------	----------
White Fife	(*)	-------	-------	-------	-------	(*)	-------	----------
Surprise	1.2	.6	.5	.1	.1	(*)	-------	----------
Varieties not reported in 1944 and 1949	5.1	2.5	.9	1.3	.6	-------	-------	----------
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	6,437,611
Varieties not reported	-------	-------	-------	-------	-------	-------	-------	178,394
Total	-------	-------	-------	-------	-------	-------	-------	6,616,005

YORKWIN

Yorkwin, a winter variety with soft white grain, distributed by the Cornell University Agricultural Experiment Station in 1935, was grown on an estimated 1,107,530 acres in 1949 (fig. 51), or nearly twice that of any other white variety. Of this 884,730 acres were in Michigan, 204,233 in New York, 10,346 in Pennsylvania, and small acreages in Kentucky, New Jersey, Indiana, Ohio, and Delaware.

ELGIN AND ALICEL

The Elgin and Alicel white club varieties of winter wheat, distributed by the Oregon Agricultural Experiment Station, were estimated grown on 596,293 and 233,803 acres, respectively, in 1949. Elgin is a selection from Alicel and the two varieties are almost identical. They were grown on an estimated 403,842 acres in Washington, 354,715 in Oregon, 70,801 in Idaho, and 738 in California in 1949. Figure 52 shows their combined distribution. Their acreage has increased greatly in Washington, Oregon, and Idaho since 1944.

FIGURE 51.—Yorkwin. 1,107,530 acres.

FIGURE 52.—Elgin and Alicel. 830,096 acres.

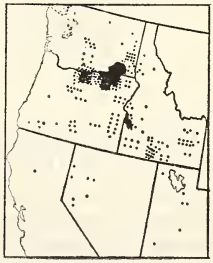

FIGURE 53.—Federation. 564,841 acres.

FEDERATION

Federation, distributed by the Oregon station, has been a prominent variety in the Pacific Northwest since the middle twenties. It was grown on an estimated 564,841 acres in 1949 (fig. 53). Of this, 280,630 acres were in Oregon, 182,281 in Washington, 84,141 in Idaho, 8,262 in Utah, 8,003 in Nevada, and 1,524 in California. The acreage in Washington has decreased greatly since 1944. Federation is grown from both fall and spring seeding.

BAART

Baart, a spring variety from Australia first distributed in the United States in 1914, was grown on an estimated 504,268 acres in 1949 (fig. 54). Of this area, 323,609 acres were in Washington, 112,077 in Idaho, 25,463 in Oregon, 21,545 in Utah, with small acreages in Arizona, Montana, Colorado, and Nevada. Baart 38, a backcross-derived strain of Baart with resistance to rust and smut, has now replaced the acreage in California formerly sown to Baart. It is estimated that in 1949 Baart 38 was grown on 147,097 acres in California, 6,166 in Arizona, and 797 in Utah.

REX

Rex, a winter wheat with soft white grain, was grown on an estimated 427,413 acres in 1949 (fig. 55), of which 204,091 were in Oregon, 116,647 in Washington, 102,317 in Idaho, 4,191 in Montana, and 167 in Nevada. Because of poor milling quality this acreage of Rex is being replaced by other bunt-resistant varieties.

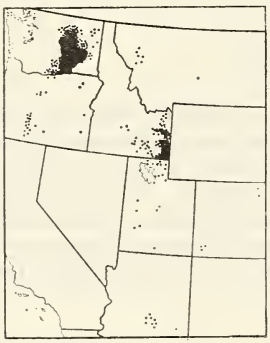

FIGURE 54.—Baart.
504,268 acres.

FIGURE 55.—Rex.
427,413 acres.

GOLDCOIN AND GOLDEN

Goldcoin was the leading variety of white wheat in the 1924 and 1929 surveys. At that time it was grown in the eastern white wheat area as well as in the west. In 1949 Goldcoin was reported on 359,678 acres, and Golden, a selection from it, on 234,199. It is likely that much of the acreage reported as Goldcoin is actually Golden. The combined acreage for the two varieties was 593,877 (fig. 56), of which 340,306 were in Washington, 149,314 in Idaho, 86,567 in Oregon, 6,506 in Ohio, 6,096 in Montana, and 5,088 in Michigan.

CORNELL 595

Cornell 595, a winter wheat distributed by the Cornell University Agricultural Experiment Station in 1942, was grown on an estimated 335,894 acres in 1949 (fig. 57). Of this area, 194,941 acres were in New York, 66,361 in Michigan, 48,510 in Ohio, 13,688 in Pennsylvania, and small acreages in Illinois, Indiana, New Jersey, Virginia, Missouri, and Wisconsin.

FIGURE 56.—Goldcoin and Golden. 593,877 acres.

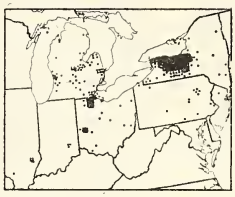

FIGURE 57.—Cornell 595. 335,894 acres.

HYMAR

Hymar, a variety of winter club, was distributed by the Washington Agricultural Experiment Station in 1935. Its acreage has remained about constant since 1939. It was grown on an estimated 269,880 acres in 1949 (fig. 58), of which 253,203 were in Washington, 13,249 in Idaho, 2,184 in Montana, and 1,244 in Oregon.

WHITE FEDERATION 38

White Federation 38, a hard spring variety derived by backcrossing to White Federation, was grown on an estimated 241,675 acres in 1949 (fig. 59). Of this acreage 238,426 were in California, 1,695 in Nevada, and 1,554 in Arizona. This bunt- and stem-rust-resistant derivative of White Federation has almost completely replaced the White Federation in California and Arizona since its release in California in 1939.

FIGURE 58.—Hymar. 269,880 acres.

FIGURE 59.—White Federation 38. 241,675 acres.

LEMHI

Lemhi, a soft spring variety released by the Idaho Agricultural Experiment Station in 1939, was grown on an estimated 202,256 acres in 1949, as shown in figure 60. Of this area, 157,178 acres were in Idaho, 33,356 in Utah, and 5,660 in Nevada, and small acreages in Oregon, California, and Montana.

OTHER VARIETIES OF WHITE WHEAT

Thirty-six additional varieties of white wheat were grown on less than 200,000 acres each. Their acreage in 1949 and percentage of the class for each survey since 1919 is given in table 12. Five are new varieties of which the acreage is increasing, but most of them are old varieties and are passing out of production.

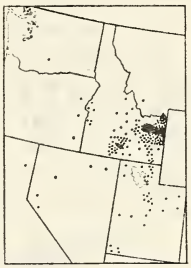

FIGURE 60.—Lemhi. 202,256 acres.

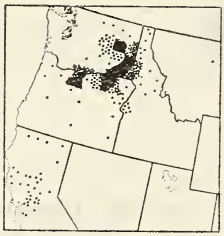

FIGURE 61.—Club wheat. 1,256,544 acres.

CLUB VARIETIES

While club varieties with white grain are included along with other white wheats in table 12, they are also listed in table 13 with the acreage of each in 1949, and the percentage that each was of the total club wheat acreage in each survey since 1919. Eleven varieties were reported grown in 1949 on 1,256,544 acres. Elgin alone occupied nearly half of the club wheat acreage in 1949, while Elgin and Alicel, which are very similar, together occupied two-thirds of the acreage. Hymar, Hybrid 128, and Big Club 43 were also grown on a considerable acreage. Six additional club varieties were reported in 1949, while six others reported in 1944 were not reported grown in 1949. Hybrid 128, which was the leading variety of club wheat in the 1920's, was grown on only 6.2 percent of the acreage in 1949. The distribution of the total white club wheat acreage in 1949 is shown in figure 61. Practically the entire club acreage is fall-seeded.

EXPERIMENT STATION PRODUCTIONS

The survey shows 199 distinct varieties of wheat were grown on farms in 1949. Of these, 118 were developed by the agricultural experiment stations in the United States and Canada. These 118 varieties were grown on an estimated three-fourths of the 84,931,000 acres grown in 1949. The rest were developed by private breeders or introduced from foreign countries other than Canada. Thirteen varieties developed by private breeders were grown on nearly 12 million acres.

TABLE 13.—*Percentage of the total acreage of club wheat occupied by each variety of that subclass in the United States at 5-year intervals since 1919, and the estimated acreage for 1949*

[The asterisk (*) indicates the variety was reported as grown, but the estimate of the acreage was less than 0.1 percent of the total acreage of the class]

Variety	Percentage of acreage							Acreage, 1949
	1919	1924	1929	1934	1939	1944	1949	
Elgin							47.5	596,293
Hymar					30.9	43.9	21.5	269,880
Alicel					.6	13.4	18.6	233,803
Hybrid 128	23.7	49.8	49.2	20.5	11.3	22.9	6.2	77,899
Big Club 43							3.2	40,048
Jenkin	6.1	13.4	12.7	6.9	3.9	2.9	1.3	16,887
Poso 44							1.2	14,984
Albit			10.8	56.4	30.6	5.6	.5	5,943
Utac			.1	.1	1.0	.9	(*)	501
Hybrid 63	3.0	1.3		.8	.7	.1	(*)	242
Bluechaff		.2	.1	.1	.2		(*)	64
Big Club	2.0	2.4	.6	5.3	8.3	5.2		
Poso				.2	5.6	1.6		
Hybrid 123	2.6	6.2	3.6	.4	1.1	1.4		
Club (varieties not reported)	44.2	19.5	17.5	3.0	4.2	1.0		
Little Club	9.7	2.6	2.4	4.0		.6		
Redchaff	3.6	.3	1.1	.6	.9	.5		
Varieties not reported in 1944 and 1949	5.1	4.3	1.9	1.7	.7			
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	1,256,544

RECOMMENDED VARIETIES

The varieties of wheat most widely grown usually are those best adapted. However, new varieties are continually being developed by Federal, State, and private breeders. The State agricultural experiment stations and the United States Department of Agriculture test new varieties in comparison with the old and thus are able to recommend the best variety or varieties for each locality. The agricultural extension services, using the information from Federal and State experiment stations, advise growers as to the best variety for any particular locality.

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